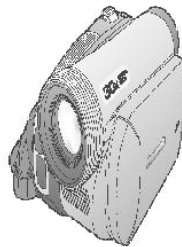


ORDER NO. VM0602008CE

Service Manual

Digital Video Camcorder
PV-GS29PL / PV-GS39PL / PV-GS69PL
Colours
(S).....Silver Type



PbF Solder Lead free

SPECIFICATIONS

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1. Safety Precautions

1.1. General Guidelines

1. IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

- 2. An Isolation Transformer should always be used during the servicing of AC Adaptor whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect AC Adaptor from being damaged by accidental shorting that may occur during servicing.**
- 3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.**
- 4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.**
- 5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.**

2. Warning

2.1. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

- 1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a**

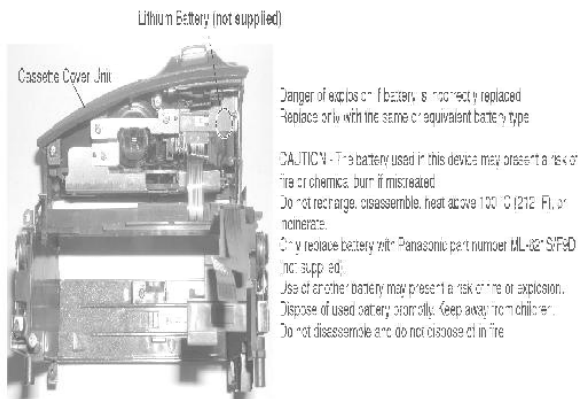
commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
 4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- CAUTION :**
Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

2.2. How to Recycle the Lithium Battery

2.3. How to Replace the Lithium Battery

The lithium battery (ML-621S/F9D) is not supplied as a service part and must be replaced as part of the Cassette Cover Unit. (Refer to "[Disassembly and Assembly Instructions](#).")



NOTE:

This Lithium battery is a critical component. (Type No.: ML-621S/F9D Manufactured by Panasonic.) (Not supplied)

It must never be subjected to excessive heat or discharge.

It must therefore only be fitted in equipment designed specifically for its use.

Replacement batteries must be of the same type and manufacture.

They must be fitted in the same manner and location as the original battery, with the correct polarity contacts observed.

Do not attempt to re-charge the old battery or re-use it for any other purpose.

It should be disposed of in waste products destined for burial rather than incineration.

<p>CAUTION</p> <p>Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.</p>
<p>PRECAUTION</p> <p>Le fait de remplacer incorrectement la pile peut présenter des risques d'explosion. Remplacer la pile uniquement par une pile identique ou de type équivalent recommandée par le fabricant. Se débarrasser des piles usagées conformément aux instructions du fabricant.</p>
<p>VORSICHT</p> <p>Bei einer falsch eingesetzten Batterie besteht Explosionsgefahr. Nur mit einer vom Hersteller empfohlenen Batterie vom gleichen Typ ersetzen. Verbrauchte Batterien beim Fachhändler oder einer Sammelstelle für Sonderstoffe abliefern.</p>
<p>VARNING</p> <p>Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparatleverkaren. Kassera använt batteri enligt fabrikantens instruktion.</p>
<p>ADVARSEL!</p> <p>Lithiumbatteri-Explosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Lever det brugte batteri tilbage til leverandøren.</p>
<p>VAROITUS</p> <p>Pariiso voi räjähtää, jos se on virheellisesti asennettu. Vaindo paristo ainoastaan laitevalmistajan suosittelemaan tyyppiä. Hävittää käytetty paristo valmistajan ohjeiden mukaisesti.</p>

3. Service Navigation

3.1. Introduction

This service manual contains technical information which will allow service personnel's to understand and service this model. Please place orders using the parts list and not the drawing reference numbers. If the circuit is changed or modified, this information will be followed by supplement service manual to be filed with original service manual.

Note 1:

AC Adaptor used on these movie camera is PV-DAC14D. However, DE-974FA is supplied as a replacement part for PV-DAC14D. This AC Adaptor is supplied only as a unit.

3.2. About Lead Free Solder (PbF)

PCBs manufactured using lead-free solder will have a Pb-free printing on the PCB. (Please refer to figures.)



- **Pb free solder has a higher melting point than standard solder**

- ## Recommendations

Recommended lead-free solder composition is Sn92.5 Ag3.0 Cu0.5

[illegible]

5. Location of Controls and Components

Quick Guide

Using the Battery

- 1 Attach the Battery to the AC Adaptor and charge it.



- Before use, fully charge the Battery.
- Since the Battery will not be charged when the DC Cable is connected to the AC Adaptor, disconnect it from the AC Adaptor.
- The [CHARGE] Lamp lights red and charging starts.
- When the [CHARGE] Lamp goes off, charging is completed.

- 2 Attach the charged Battery to the Camcorder.



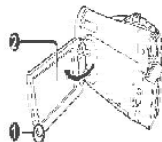
Inserting a Cassette

- 1 Slide the [OPEN/EJECT] Lever ① toward the front and pull up to fully open the Cassette Compartment Cover.
 - To protect the tape, if the cover is not fully opened, the cassette holder cannot be ejected.
- 2 After the Cassette Holder is opened, insert a Cassette.

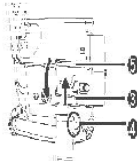


Inserting a Card

- 1 Place your Thumb on the [OPEN] ① Knob and pull the LCD Monitor ② out in the direction of the arrow.



- 2 Open the Card Slot Cover ③.
- 3 While holding the Memory Card with its cut corner facing right ④, insert it into the Card Slot ⑤.
- 4 Close the Card Slot Cover ③ securely.

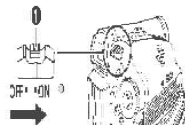


Turning on the Camcorder

- Open the LCD Monitor or extend the Viewfinder before turning on the power.

How to Turn on the Power

- 1 Set the [OFF/ON] Switch to [ON] while pressing the button ①.
 - The [STATUS] Indicator lights Red.



How to Turn off the Power

- 2 Set the [OFF/ON] Switch to [OFF] while

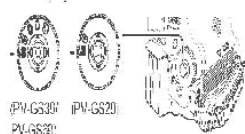
- 2 Adjust by turning the Eyepiece Corrector Knob ①



Recording on a Tape

- 1 Set the Mode Dial to Tape Recording Mode.

- The [TAPE RECORDING MODE] is displayed on the screen.



- 2 Press the Recording Start/Stop Button.

- Recording starts.



- 3 Press the Recording Start/Stop Button again to pause the recording.

Recording a Still Picture on Card (Photoshot)

(For PV-GS39/PV-GS69)

- 1 Set the Mode Dial to Card Recording Mode.

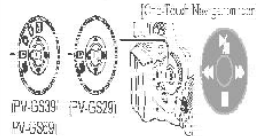
- The [CARD RECORDING MODE] is displayed on the screen.



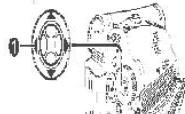
Playing Back a Tape

- 1 Set the Mode Dial to Tape Playback Mode.

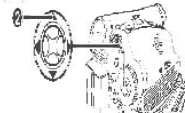
- The [TAPE PLAYBACK MODE] is displayed on the screen.
- The One-Touch Navigation icon is displayed on the lower right of the screen.



- 2 Move the Joystick Control [◀] ① to rewind the tape.



- 3 Move the Joystick Control [▶] ② to start playback.



- 4 Move the Joystick Control [▼] ③ to stop playback.



Playing Back a Card

(For PV-GS39/PV-GS69)

- 1 Set the Mode Dial to Picture Playback Mode.





- The [CARD PLAYBACK MODE] is displayed on the screen.

Before Using

Before Using

Standard Accessories

The following accessories are supplied with your Camcorder.

<p>1)  PV-DACT40 K2G3ZDC00011 K2CAZCAC00025</p>	<p>2) </p>
<p>4)  LSFCC18</p> <p>5)  K1HA65CD004 LSFTG648 (For PV-GS36) (PV-GS89 Only) PV-GS89</p>	

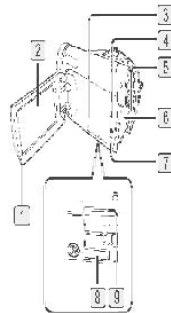
1) AC Adaptor, DC Cable and AC Cable (pp. 15~16)

CAUTION:

This unit will operate on 115V/120V/220/240 V AC. An AC plug adaptor may be required for voltages other than 120 V AC. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug.
Do not remove using the accessory power.

Parts Identification and Handling

■ Camcorder



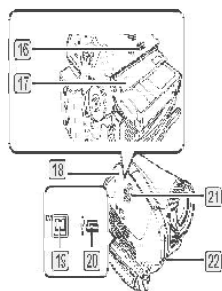
- 1 LCD Monitor Open Knob [OPEN] (p. 22)
- 2 LCD Monitor (pp. 24~25, 78)

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen.
However, this is not a malfunction and does not affect the recorded picture.

- 3 Card Access Lamp (p. 20)
- 4 Reset Button [RESET] (pp. 79, 81)
- 5 DC Input Jack [DC IN] (p. 16)
- 6 Battery Holder (p. 16)
- 7 Mode Selector Switch [AUTO/MANUAL/FOCUS] (pp. 31, 42~46)
- 8 Card Slot Cover (p. 20)
- 9 Card Slot (p. 20)



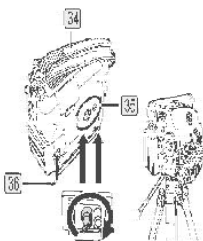
- 13 Zoom Lever [W/T] (pp. 37, 49)
Volume Lever [- 00 / VOL +] (pp. 47, 60)
- 14 Microphone (built-in, stereo) (pp. 37, 47)
- 15 Audio-Video Output Jack [AV OUT] (pp. 63, 66)
- Connecting an AV Cable to this jack activates the Camcorder's built-in speaker.
 - When connecting the pin plug of the AV Cable to this jack, plug it in as far as it goes.



- 16 Cassette Eject Lever [OPEN/EJECT] (p. 18)
- 17 Cassette Holder (pp. 18~19)
- 18 Cassette Compartment Cover (pp. 18~19)
- 19 DV Input/Output Terminal (pp. 66~67, 69~70)
- Connect this to the digital video equipment.
- 20 USB Jack [A-B] (For PV-GS33/PV-GS69) (pp. 60~61, 63, 65)
- 21 Speaker (p. 47)
- 22 Built-in LED Light (p. 36)



- 24 Eyepiece Corrector Knob (p. 22)
- 25 Photoshot Button [PHOTO SHOT] (pp. 23, 34)
- 26 Shoulder Strap Holders (p. 18)
- 27 Power Switch [OFF/ON] (p. 21)
- 28 Status Indicator [STATUS] (pp. 21, 36)
- 29 Menu Button [MENU] (p. 26)
- 30 Mode Dial (p. 23)
- 31 Recording Start/Stop Button (p. 31)
- 32 Joystick Control (pp. 23, 26)
- 33 Light Button [LIGHT] (p. 36)



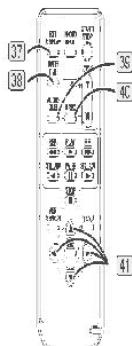
- 34 Grip Bell (p. 17)
- 35 Tripod Receptacle
- This is a hole for attaching the Camcorder to optional tripod. (Please carefully read the Operating Instructions for how to attach the tripod to the Camcorder.)
 - You cannot open the Card Slot Cover when the tripod is used. Insert the card first and then attach the tripod.
- 36 Battery Eject Switch [BATTERY RELEASE] (p. 16)

Before Using

■ Remote Control

(PV-GS69 Only : Optional)

Using the Remote Control with the Camcorder, most of the Camcorder functions can be operated from a distance.



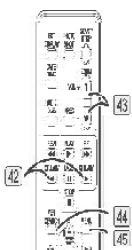
37 Indication Output Button [EXT DISPLAY] (pp. 54, 56)

38 Date/Time Button [DATE/TIME] (p. 29)

39 Audio Dubbing Button [AUDIO DUB] (p. 56)

40 Recording Button [• REC] (p. 67)

41 Cursor buttons for Variable Speed Search Function [▲ ▼] (p. 48)
Select Button [▲ ▼ ◀ ▶] (p. 27)



46 Photoshot Button [PHOTO SHOT] (pp. 33-34)

47 Rewind/Review Button [◀▶] (p. 48)

48 Pause Button [⏸] (pp. 49, 56, 57)

49 Stop Button [■] (p. 16, 57)

50 Recording Start/Stop Button [START/STOP] (p. 31)

51 Play Button [▶] (pp. 48-49, 67)

52 Fast Forward/Cue Button [▶▶] (p. 48)

53 Enter Button [ENTER] (p. 27)

* means that these buttons function in the same manner as the corresponding buttons on the Camcorder.

The Remote Control (PV-GS69 Only : Optional)

Inserting the Button-type Battery

Before using the Remote Control, insert a button-type battery (not supplied).

- 1 While pressing the Lock Button ①, pull out the Battery Holder.

3 Insert the Battery Holder into the Remote Control.



- When the button-type battery is exhausted, replace it with a new CR2025 battery. A battery is normally expected to last about 1 year. However, it depends on operation frequency.
- Make sure to match the poles correctly when inserting the button-type battery.

⚠ WARNING

- Use Battery with Panasonic type CR2025 only. Use of another battery may present a risk of fire or explosion.
- Battery may explode if mistreated.
- As with any small object, this type of Battery can be swallowed by young children. Do not allow children to handle this Battery.

⚠ CAUTION

- Dispose of used battery promptly.
- Do not recharge, disassemble or dispose of in fire.

Using the Remote Control (PV-GS69 Only : Optional)

- 1 Direct the Remote Control at the Remote Control Sensor of the Camcorder and press an appropriate button.



■ Selecting Remote Control Modes

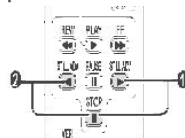
When 2 Camcorders are used simultaneously, they can be operated individually by selecting different Remote Control Modes.

- If the Remote Control Mode of the Camcorder and that of the Remote Control do not match with each other, [REMOTE] will appear. When the Remote Control is operated for the first time after the Camcorder is turned on, [CHECK REMOTE MODE] (p. 74) will appear and operation is impossible. Set the same Remote Control Mode.

■ Setup on the Camcorder

Set [REMOTE] on the [SETUP] Sub-Menu to the desired Remote Control Mode. (p. 27~28)

■ Setup on the Remote Control



[VCR1]

Press the [▶] Button and [■] Button simultaneously. ①

[VCR2]

Press the [◀] Button and [■] Button simultaneously. ②

- When the battery in the Remote Control is replaced, the mode is automatically reset to [VCR1] mode.

Before Using

Power Supply

Using the AC Adaptor

- Before connecting or disconnecting the power supply, set the [OFF/ON] Switch on the Camcorder to [OFF], and make sure that [STATUS] indicator is not lit. (p. 24)



- 1 Connect the DC Cable to the Camcorder.
- 2 Connect the DC Cable to the AC Adaptor.
- 3 Connect the AC Cable to the AC Adaptor and the AC Jack.



Using the Battery

Before use, fully charge the Battery.

- We recommend using a Panasonic Battery.
- We cannot guarantee the quality of this Camcorder when batteries from other companies are used.

- 1 Attach the Battery to the AC Adaptor and charge it.
- 2 Put the Battery on the Battery Mount by aligning the mark, and then securely plug it in.



- Since the Battery will not be charged when the DC Case is connected to the AC Adaptor, disconnect it from the AC Adaptor.

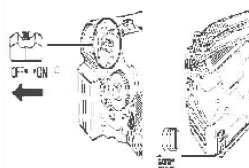
- 3 Attach the charged Battery to the Camcorder.



Disconnecting the Power Source

Set the [OFF/ON] Switch to [OFF], and while sliding the [BATTERY RELEASE] Switch, remove the Battery downward or DC Case.

- When attaching or removing Battery, set the [OFF/ON] Switch to [OFF] and make sure the [STATUS] indicator is not lit.


















- Hold down the battery with your hand so it does not fall.

Notes:


- When the Camcorder has been used for a long time, the Camera body becomes warm, but this is not a malfunction.
- If the [CHARGE] Lamp does not light up although the Battery is attached to the AC Adaptor, detach the Battery and reattach it.


Charging Time and Available Recording Time

Supplied battery (V-V-GS29) CGR-DJ06		1 h 40 min.
		1 h 50 min. (1 h 25 min.)

Optional battery (PV-GS89; CGA-DU06) (7.2 V / 840 mAh)		1 h 40 min.
Optional battery (PV-GS29; CGA-DU12) (7.2 V / 1150 mAh)		1 h 45 min. (1 h 20 min *)
		55 min. (40 min *)
Optional battery (PV-GS29; CGA-DU12) (7.2 V / 1150 mAh)		2 h 25 min.
		3 h 15 min. (2 h 40 min *)
		1 h 40 min. (1 h 20 min *)
Optional battery (PV-GS39; CGA-DU12) (7.2 V / 1150 mAh)		2 h 25 min.
		3 h 10 min. (2 h 30 min *)
		1 h 35 min. (1 h 15 min *)
Optional battery (PV-GS29; CGA-DU21) (7.2 V / 2040 mAh)		3 h 55 min.
		5 h 45 min. (4 h 30 min *)
		2 h 55 min. (2 h 15 min *)
Optional battery (PV-GS39/PV-GS69; CGA-DU21) (7.2 V / 2040 mAh)		3 h 55 min.
		5 h 30 min. (4 h 15 min *)
		2 h 45 min. (2 h 10 min *)

 Charging Time

 Maximum Continuous Recording Time






 Intermittent Recordable Time

(The intermittent recordable time refers to recordable time when the recording and stopping operations are repeated.)

* "1 h 40 min" indicates 1 hour and 40 minutes.

* Battery CGA-DU06 (PV-GS29/PV-GS39) or CGA-DU12 (PV-GS89) is supplied.

* The times shown in the table are approximate times. The numbers indicate the recording time when the Viewfinder is used. The numbers in parentheses indicate the recording time when the LCD Monitor is used. In actual use, the available recording time may be shorter.

• Along with the reduction of the battery capacity, the display will change:  →  →  → . If the battery discharges, then  will flash.

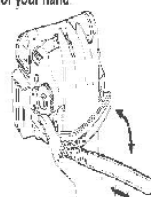
To Use as a Grip Belt

Adjust the length of the Grip Belt to the size of your hand.

1 Detach the end of the Grip Belt.



2 Adjust the length of the Grip Belt to the size of your hand.



3 Reattach the Grip Belt.



Before Using

Re-attaching the Lens Cap

To protect the Lens surface, attach the Lens Cap.

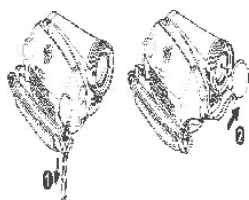
- The Lens Cap and Lens Cap Cord come preattached to the Grip Belt.



- 1 Pass one end of the Lens Cap Cord through the attached eye on the Lens Cap. Then pass the Lens Cap through the loop made by itself and pull tight.



- When not using the Lens Cap, pull the Lens Cap Cord in the direction of the arrow. ①
- When you are not recording, be sure to cover the Lens with the Lens Cap for protection. ②



- When you remove the Lens Cap, press the knobs firmly.



Attaching the Shoulder Strap

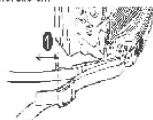
We recommend that you attach the Shoulder Strap before going out to avoid dropping the Camcorder.

- 1 Pull the end of the Shoulder Strap through the Shoulder Strap Holder on the Camcorder.



- 2 Fold the end of the Shoulder Strap, run it through the Shoulder Strap Length Adjuster, and pull it.

- Pull it out more than 1 inch (2 cm) ① from the Shoulder Strap Length Adjuster so that it cannot slip off.



- Attach the other end of the Shoulder Strap to the other Shoulder Strap Holder in the same way.

Inserting/Removing a Cassette

- Please use Genuine Panasonic DVC Tapes for more information please contact your local dealer or visit www.panasonic.com.
- For your reference if you travel frequently you should also purchase a Panasonic head cleaning tape AY-DVMQLA and use when HEAD CLOG message appears on the LCD/VIEW of your Camcorder.

- 1 Fit the AC Adaptor or the Battery and turn on the Power.

3 After the Cassette Holder is opened, insert/remove a Cassette.



- When inserting a cassette, orient it as shown in the above, and then securely insert it as far as it goes.
- When removing, pull it straight out.

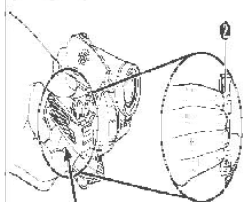
4 Close the Cassette Holder by pressing the [PUSH] mark ①.

- The Cassette Holder is housed.



Caution :

Before closing the Cassette Holder ④, be sure your fingers have not been placed underneath the Cassette Holder as shown below. This may cause your fingers to jam in the cassette holder.

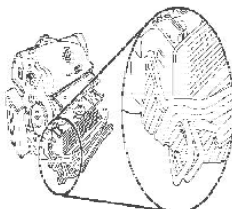


Do not place fingers here. [Side view]

5 Only after the Cassette Holder is completely housed, since the Cassette

■ When the Cassette Holder does not come out

- Close the Cassette Compartment Cover completely, and then open it again completely.
- Check if the battery has run down.
- Check if the Cassette Compartment Cover is in contact with grip belt as shown below. If so, be sure the grip belt stays clear of the cover when opening.




■ When the Cassette Holder cannot be housed

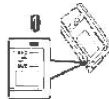
- Set the [OFF/ON] Switch to [OFF], then to [ON] again.
- Check if the battery has run down.

Notes:

- After use, be sure to rewind the cassette completely, remove it and put it in a case. Store the case in an upright position (p. 77).
- If the indicator of the condensation does not display on the LCD screen and/or Viewfinder and you notice condensation on the lens of the main unit, do not open the cassette cover otherwise condensation may be formed on the heads of the cassette tape. (p. 75).
- When inserting a previously recorded Cassette, use the Blank Search Function (p. 32) to find the position where you want to continue recording. If you overwrite-record on a previously recorded cassette, be sure to find the position where you want to continue recording.
- If a new Cassette is inserted, rewind to the beginning of the two hours of recording.

Accidental Erasure Prevention

Opening the accidental erasure prevention slider  on the cassette (by sliding it to the [SAVE] arrow direction) prevents recording. To enable recording, close the accidental erasure prevention slider (by sliding it to the [REC] arrow direction).



Using a Memory Card (Optional) (For PV-GS39/PV-GS69)

A Card can be used to record still pictures.

- Use a genuine SD Memory Card manufactured by Panasonic only.


Before inserting or removing a Card, be sure to turn off the Camcorder.

- Otherwise, the Camcorder may not function properly or it may cause the loss of recorded data in a Card.

Inserting/Removing a Card

- 1 Turn off the Power.
- 2 Open the LCD Monitor and then open the Card Slot Cover.



- 3 While holding the Memory Card with its cut corner facing right , insert/remove it into/from the Card Slot.



Removing the Card

Open the Card Slot Cover and press the center of the Card and then pull it straight out.

- After removing the Card, close the Card Slot Cover.
- The Camcorder may be damaged if the Card is forced out when the Card is fully inserted.

Concerning the Write Protection Switch on the SD Memory Card

The SD Memory Card has a write protector switch on it. If the switch is moved to [LOCK], you cannot write to the card, erase the data on it, or format it. If it is moved back, you can.

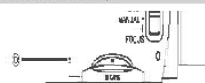
Concerning the Card

- Do not touch the terminals on the back of the card.
- Do not format the card with another Camcorder or any personal computer. This operation may make the card unusable.
- Electrical noise, static electricity, or failure of the Camcorder or the card may damage or erase the data stored on the card. We recommend saving important data on a personal computer by using a USB Cable, PC Card Adaptor, and USB Reader/Writer.

SD Memory Card

- The memory capacity indicated on the SD Memory Card label corresponds to the total amount of capacity to protect and manage the copyright and the capacity available as conventional memory for a Camcorder, personal computer or other equipment.

Card Access Lamp



While the Camcorder is accessing the Card (reading, recording, playback or erasing), the Card Access Lamp lights up.

- While the Card Access Lamp is on, never attempt to open the Card Slot Cover, to pull out the Card.

Turning on the Camcorder

Turn on the power first, and then select modes.

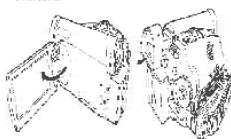
■ How to Turn on the Power

- 1 Set the [OFF/ON] Switch to [ON] while pressing the button **Q**.



- 2 Open the LCD Monitor or extend the Viewfinder to use.

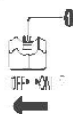
- The [STATUS] indicator lights Red and L.m on the power.
- The LCD Monitor or Viewfinder will be activated.



■ How to Turn off the Power

- 1 Set the [OFF/ON] Switch to [OFF] while pressing the button **Q**.

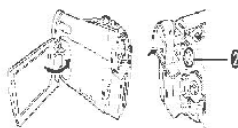
- The [STATUS] indicator goes off when the power turns off.
- In Tape Recording Mode or Card Recording Mode, if the [OFF/ON] Switch is set to [ON] while the LCD Monitor and Viewfinder are closed, the power turns off.



How to turn the power on and off with

When the camcorder is turned on for the first time, the [SET DATE AND TIME] screen will appear. Select [YES] and set the date and time.

- 2 Close the LCD Monitor and retract the Viewfinder.



- The power will not turn off if the LCD Monitor is closed and the Viewfinder is retracted.
- The [STATUS] indicator **Q** automatically goes off and the power turns off. (If Quick Start is set to [ON] (pp. 35-36), the unit goes into Quick Start standby mode and the [STATUS] indicator lights Green.)
- Even if the LCD Monitor is closed or the Viewfinder is retracted while recording on a tape, the power does not turn off. (The Viewfinder stays lit up.)

- 3 Open the LCD Monitor or extend the Viewfinder again.



- The [STATUS] indicator lights Red and turn on the power.

Setting Date and Time

When the Camcorder is turned on for the first time, [SET DATE AND TIME] will appear. Select [YES] and set the date and time.

- If the screen shows the incorrect Date/Time, then adjust it.



Before Using

- 1 Set [] BASIC] >> [] CLOCK SET] >> [YES].



- 2 Move the Joystick Control [] or [] to select the item to be set. Then move the Joystick Control [] or [] to set the desired value.

• Year will cycle in the order shown below:
2000, 2001, ..., 2069, 2000, ...

- 3 Press the Joystick Control to finish setting the date and time.

• The clock operation starts from 100 seconds.

- If the built-in battery is weak, the [] indication flashes. In this case, charge the built-in battery.
- The clock uses the 12-hour system.

■ About Date/Time

- The Date and Time function are driven by a built-in lithium battery.
- Make sure to check the time before recording because the built-in clock is not very accurate.

■ Recharging the built-in lithium battery

If [] or [] is appears when the Camcorder is turned on, then the built-in lithium battery has run down. Use the steps below to charge the battery. When the battery is inserted for the first time after charging, [SET DATE AND TIME] will appear. Select [YES] and set the date and time. Connect the AC adaptor to the Camcorder or place the battery on the Camcorder, and the built-in lithium battery will be recharged. Leave the camera as is for approx. 24 hours, and the battery will charge the date and time for approx. 6 months. (Even if the [OFF/ON] Switch is set to [OFF], the battery is still being recharged.)

Using the Viewfinder/LCD Monitor

Using the Viewfinder

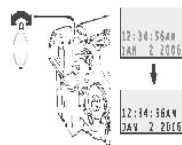
Before using the Viewfinder, adjust the field of view so that the displays inside the Viewfinder become clear and easy to read.

- 1 Pull the Viewfinder.



- The Viewfinder will be activated.

- 2 Adjust by turning the Eyepiece Corrector Knob.



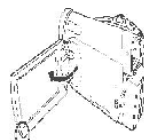
- You can adjust the brightness from the Menu.

Using the LCD Monitor

With the LCD Monitor open, you can also record the picture while watching it.

- 1 Place your Thumb on the [OPEN] Knob and pull the LCD Monitor out in the direction of the arrow.

- The LCD Monitor will be activated.
- It can open up to 80°.



- The brightness and color level of the LCD Monitor can be adjusted from the Menu.
- If it is forcibly opened or rotated, the Camcorder may be damaged or fail.
- Check that the Card Slot Cover is closed before closing the LCD Monitor.
- If the LCD Monitor is rotated by 180° towards the lens and the Viewfinder is opened (when recording yourself), the LCD Monitor and the Viewfinder simultaneously light.

■ Closing the LCD Monitor

- Push the LCD Monitor until it is securely locked.
- Make sure the Card Slot Cover is closed.

Adjusting Brightness and Color Level

When [LCD SET] or [EVF SET] on the [4] SETUP Sub-Menu is set to [YES], the following items are displayed.



[LCD SET] LCD Brightness []

Adjusts the brightness of the image on the LCD screen.

[LCD SET] LCD Color Level []

Adjusts the color saturation of the image on the LCD screen and the Viewfinder.

[EVF SET] Brightness of the Viewfinder []

Adjusts the brightness of the image in the Viewfinder.

■ To Adjust

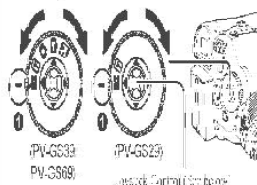
- Move the Joystick Control [▲] or [▼] and select the item to be adjusted, and then move the Joystick Control [◀] or [▶] to raise or lower the number of vertical bars in the Bar indication.
- More vertical bars indicates stronger brightness or color saturation.
- Press the [MENU] Button or the Joystick Control to complete the settings.

Easy to Use Mode Dial

You can choose a desired mode by rotating the Mode Dial.

1 Rotate the Mode Dial.

- Set your desired mode to 0.



Before Using

■ Tape Recording Mode

Use this mode when recording pictures on a tape.

■ Tape Playback Mode

Use this mode when playing back the recorded scene on a tape.

■ Card Recording Mode

(For PV-GS33/PV-GS69)

Use this mode when recording still pictures on a card.

■ Picture Playback Mode

(For PV-GS33/PV-GS69)

Use this mode when playing back the recorded still picture on a card.

■ PC Mode (For PV-GS33/PV-GS69)

Use this mode when you want to connect the Camcorder to your Personal Computer. You can view or edit the images recorded on a card on your personal computer.

How to Use the Joystick Control

Basic Joystick Control Operations

Operations on the menu screen and selection of files to be played back on the multi-image display.

Move the Joystick Control [▲] [▼] [◀] [▶] to select items on the menu screen or the multi-image display.

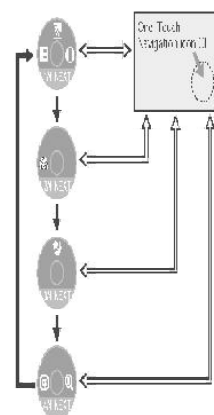
Joystick Control and Screen Display

Press the center of the Joystick Control and the One-Touch Navigation icon will be displayed on the lower right of the screen.

- Press the Joystick Control again to turn off the One-Touch Navigation icon.
- Pressing the center button of the Joystick Control again to redisplay the One-Touch Navigation icon will display the 1st page used.

Each press of [▼] switches the display as follows depending on the mode.

- ⇒ Press Center (eg. Tape Recording Mode [AUTO])
- ⇒ Press ▼

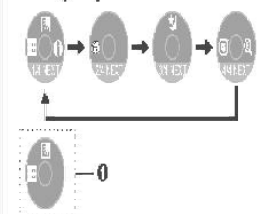


Move the Joystick Control [▲, ▼, ◀, or ▶] to select an item.

- In the Tape Playback Mode or the Picture Playback Mode, the One-Touch Navigation icon will be automatically on the lower right of the screen.

Tape Recording Mode

- When the [AUTO/MANUAL/FOCUS] Switch is set to [AUTO]

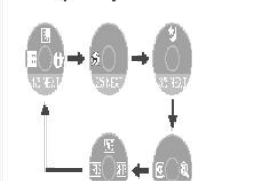


◀	Fade	pp. 38-39
▶	Help Mode	p. 38
▲	Backlight compensation	p. 39
▼	Go to next page	-
◀	Soft Skin Mode	p. 40
▶	Go to next page	-
▲	MagicPict Mode	p. 40
▼	Go to next page	-
◀	Recording Check	p. 32
▶	Blank Search Mode	p. 32
▼	Go to next page	-

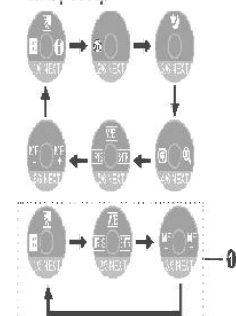
- is displayed while recording on a tape

Tape Recording Mode

- When the [AUTO/MANUAL/FOCUS] Switch is set to [MANUAL]



- When the [AUTO/MANUAL/FOCUS] Switch is set to [FOCUS],

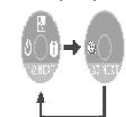


E16	◀	MF - Manual Focus Adjustment Mode	p. 46
	▶	MF - Manual Focus Adjustment Mode	p. 46
	▼	Go to next page	-

- **1** is displayed while recording on a tape.

(For PV-GS38/PV-GS69)

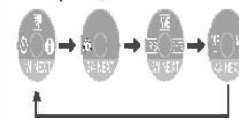
- When the [AUTO/MAVUAL/FOCUS] Switch is set to [AUTO].



1.2	◀ Self-timer Mode	p. 36
	▶ Help Mece*	p. 26
	▲ Backlight compensation	p. 39
	▼ Go to next page	-
2.2	◀ Soft Skin Mode	p. 40

(For PV-GS39/PV-GS69)





- When the [AUTO/MANUAL FOCUS] Switch is set to FOCUS.



4/4	◀	WF - Manual Focus Adjustment Mode	p. 46
	▶	WF + Manual Focus Adjustment Mode	p. 46
	⏏	Go to next page.	—

■ Tape Playback Mode



	Playback: Pause	p. 47
	Fast (Que Playback)	p. 48
	Rewind (Review Playback)	p. 48
	Stop	p. 47

(For PV-GS39/PV-GS69)

- 100



	Start the Slide Show	pp. 49-51
	Stop the Slide Show	
	Playback the next picture	p. 49
	Playback the previous picture	p. 49
	Erase the picture	p. 51

Before Using

*Help Mode

• Set to Tape/Card Recording Mode.

You can view function help information using One-Touch Navigator.

- 1 Press the Joystick Control to display the One-Touch Navigator icon on the lower right of the screen.
- 2 Move the Joystick Control [▼] until the page with (H) indication is displayed.



- 3 Move the Joystick Control [▶] to select (H).



- 4 Move the Joystick Control [▲▼▶▶] to select the desired function.



- An explanation of the selected icon is displayed on the screen.
- Each time the Joystick Control is moved down, the indication changes.

■ To end the Help Mode

Move the Joystick Control [▶] to select [EXIT] or press the [MENU] Button.

Notes:

Using the Menu Screen

To facilitate the selection of a desired function or setup, this Camcorder displays various function setups on Menus.

- 1 Press the [MENU] Button.



- The Menu corresponding to the Mode selected by the Mode Dial is displayed.
- Do not switch the Mode Dial when the Menu is displayed.



- 2 Move the Joystick Control [▲] or [▼] to select the top menu.



- 3 Move the Joystick Control [▶] or press it to set the selection.

- 4 Move the Joystick Control [▲] or [▼] to select the Sub-Menu.



■ To Return to the Previous Screen

Move the Joystick Control [4].

■ To Exit the Menu Screen

Press the [MENU] Button again.

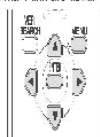
■ About the Menu Mode Setting

The setting selected on the Menu will be retained even when the Camcorder is turned off. However, if the Battery or AC Adaptor is disconnected before turning off the Camcorder, the selected setup may not be retained.

• Menu operation flow is shown in this text by >>

Operating with Remote Control (PV-GS69 Only : Optional)

The menu screen transition is the same as when the buttons on the main unit are used.



1 Press the [MENU] Button.

2 Select a menu item.

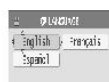
• Use the Select Button (▲▼◀▶) and [ENTER] Button in place of the Joystick Control on the main unit.

3 Press the [MENU] Button to exit the menu screen.

Selecting Language

You can select the desired language.

1 Set [Q] [LANGUAGE] >> [English], [Français] or [Español].



List of Menu

The figures of the Menu are for explanation purposes only, and they are different from the actual Menu.

■ [TAPE RECORDING MENU]



[X] BASIC

Basic Setup Sub-Menu

[S] SCENE MODE

Scene Mode (pp. 42~43)

[R] REC SPEED

Recording Speed Mode (p. 33)

[W] WIND CUT

Wind Noise Reduction (p. 41)

[A] ASPECT (For PV-GS39/PV-GS69)

Wide Screen Mode (p. 41)

[C] CINEMA (PV-GS29 Only)

Cinema-like Format Recording (p. 41)

[C] CLOCK SET

Date and Time Setting (pp. 21~22)

[A] ADVANCED

Advance Setup Sub-Menu

[P] PICT. QUALITY (For PV-GS39/PV-GS69)

Picture Quality (p. 33)

[E] EIS

Image Stabilizer (p. 35)

[F] FADE COLOR

Fade color (pp. 38~39)

[A] AUDIO REC

Audio Recording Mode (p. 29)

[U] USB FUNCTION (PV-GS69 Only)

USB Functions Mode (pp. 63~69)

[Z] D.ZOOM

Digital Zoom (p. 37)

[M] ZOOM MIC

Zoom Microphone (p. 37)

- [] **[LCD SET]**
LCD Adjustment (p. 23)
- [] **[EVF SET]**
Viewfinder Adjustment (p. 23)
- [] **[INITIAL SET]**
Initial Setting Mode (p. 30)
- [] **[DEMO MODE]**
Demonstration Mode (p. 30)
- [] **[LANGUAGE]**
Language Setup Sub-menu (p. 27)

■ [TAPE PLAYBACK MENU]



- [] **[BASIC]**
Basic Setup Sub-Menu
 - [] **[SCENE MODE]**
Scene Modes (pp. 42~43)
 - [] **[PICT.QUALITY]**
Picture Quality (p. 33)
 - [] **[ASPECT]**
Wide Screen Mode (p. 41)
 - [] **[CLOCK SET]**
Date and Time Setting (pp. 21~22)
 - [] **[ADVANCED]**
Advance Setup Sub-Menu
 - [] **[BURST MODE]**
Rapid Fire Consecutive Photoshot (p. 34)
 - [] **[SHTR EFFECT]**
Shutter Effect (p. 33)
 - [] **[SETUP]**
Setup Sub-Menu
 - [] **[DISPLAY]**
Display Mode (p. 29)
 - [] **[DATE/TIME]**
Date and Time Indication (pp. 29, 73)
 - [] **[POWER SAVE]**
Power Save Mode (p. 30)
 - [] **[QUICK START]**
Quick Start Mode (pp. 35~38)
 - [] **[REMOTE]** (PV-GS88 Only)
Remote Control Mode (p. 15)
 - [] **[BEEP SOUND]**
Beep Sound (p. 29)
 - [] **[LCD SET]**
LCD Adjustment (p. 23)
 - [] **[EVF SET]**
Viewfinder Adjustment (p. 23)

■ [CARD RECORDING MENU] (For PV-GS39/PV-GS69)



- [] **[BASIC]**
Basic Setup Sub-Menu
 - [] **[SCENE MODE]**
Scene Modes (pp. 42~43)
 - [] **[PICT.QUALITY]**
Picture Quality (p. 33)
 - [] **[ASPECT]**
Wide Screen Mode (p. 41)
 - [] **[CLOCK SET]**
Date and Time Setting (pp. 21~22)
 - [] **[ADVANCED]**
Advance Setup Sub-Menu
 - [] **[BURST MODE]**
Rapid Fire Consecutive Photoshot (p. 34)
 - [] **[SHTR EFFECT]**
Shutter Effect (p. 33)
 - [] **[SETUP]**
Setup Sub-Menu
 - [] **[DISPLAY]**
Display Mode (p. 29)
 - [] **[DATE/TIME]**
Date and Time Indication (pp. 29, 73)
 - [] **[POWER SAVE]**
Power Save Mode (p. 30)
 - [] **[QUICK START]**
Quick Start Mode (pp. 35~38)
 - [] **[REMOTE]** (PV-GS88 Only)
Remote Control Mode (p. 15)
 - [] **[BEEP SOUND]**
Beep Sound (p. 29)
 - [] **[LCD SET]**
LCD Adjustment (p. 23)
 - [] **[EVF SET]**
Viewfinder Adjustment (p. 23)

PICTURE PLAYBACK MENU (For PV-GS39/PV-GS69)



[BASIC]

Basic Setup Sub-Menu

[DATE/TIME]

Date and Time indication (p. 29-73)

[PROTECT]

Setting the Lock (p. 52-53)

[ADVANCED]

Advance Setup Sub-Menu

[DPOF SET]

Setting DPOF (p. 52)

[FORMAT CARD]

Formatting a Card (p. 53)

[SETUP]

Setup Sub-Menu

[DISPLAY]

Display Mode (p. 29)

[REMOTE] (PV-GS69 Only)

Remote Control Mode (p. 15)

[LCD SET]

LCD Adjustment (p. 29)

[EVF SET]

Viewfinder Adjustment (p. 23)

[POWER SAVE]

Power Save Mode (p. 30)

[TV ASPECT]

TV Aspect Mode (p. 53)

[LANGUAGE]

Language Setup Sub-menu (p. 27)

Menus Related to Taking Pictures

DATE/TIME

This switches between date and time indications.

Set **[BASIC]** or **[SETUP]** >> **[DATE/TIME]**

>> **[DATE]**, **[DATE]** or **[OFF]**.

- The Camcorder automatically records the date and time of picture taking on the tape.

- You can also show or change the Date/Time indication by repeatedly pressing the **[DATE/TIME]** button on the Remote Control (PV-GS69 Only).

DISPLAY

Set **[SETUP]** >> **[DISPLAY]** >> **[ON]** or **[OFF]**.

Set to **[ON]** and the display mode can be switched to all functions. Set to **[OFF]** and it can be switched to minimum display.

AUDIO REC

- Set to Tape Recording Mode.

You can select the sound quality of the recorded sound.

Set **[ADVANCED]** >> **[AUDIO REC]** >>

[12bit] or **[16bit]**

[12bit] Records audio in "12 ch 32 kHz, 4 tracks". The original audio signals can be kept after the other audio signals are dubbed.)

[16bit] Records audio in "16 ch 48 kHz, 2 tracks". Audio can be recorded in higher quality. (If audio signals are dubbed, then the original audio signals will be erased.)

BEEP SOUND

- Set to Tape/Card Recording Mode.

When **[BEEP SOUND]** on the **[SETUP]** is set to **[ON]**, confirmation beeps are issued as follows.

- Beep
- When you start recording
- When you turn on the power
- When the unit goes from Quick Start standby mode to recording pause

■ POWER SAVE

Set [] SETUP >> [] POWER SAVE >> [5 MINUTES] or [OFF].

When about 5 minutes passed without any operation, the standby mode automatically will be set. In the standby mode, [] blinks and it takes time more than usual to start recording after you press the Recording Start/Stop Button.

[5 MINUTES]
When about 5 minutes passed without any operation, the Camcorder automatically turns off to protect the tape or to prevent the battery from running down. When you use the Camcorder, turn it on again.

- In the following cases, the power may not turn off even when set [] POWER SAVE >> [5 MINUTES]
 - When connecting to the AC Jack (When using the AC Adaptor)
 - When connecting the USB Cable or the DV Cable to a PC or other equipment
 - When the PC Mode (For PV-GS39/PV-GS99)

Menus Related to Playback

■ AUDIO OUT

This switches the sound to be played back.

Set [] SETUP >> [] AUDIO OUT >>

[STEREO], [L] or [R].

[STEREO]: Stereo sound (main sound and sub sound)

[L]: Left channel sound (main sound)

[R]: Right channel sound (sub sound)

Other Menus

■ INITIAL SET

- Set to Tape/Card Recording Mode.

Set [] SETUP >> [] INITIAL SET >> [YES] or [NO].

Set to [YES] to change menu settings back to their factory default function.

■ DEMO MODE

- Set to Tape Recording Mode.

If you set [] SETUP >> [] DEMO MODE

>> [ON] without inserting a cassette or a

card, the Camcorder is automatically set to

the demonstration mode for introducing its

functions. If any button is pressed or operated,

the demonstration mode is canceled. If no

operations take place for approx. 10 minutes,

the demonstration mode automatically starts.

To terminate the demonstration mode, insert a

cassette or a card, or set to [] DEMO MODE >>

[OFF]. For normal use, set this function to [OFF].

LP Mode

You can switch the tape recording speed.

- Set to Tape Recording/Playback Mode.

1 Set [] BASIC or [] ADVANCED >> [] REC SPEED >> [LP].

If the LP mode is selected, the recording time will be 1.5 times the SP mode, but some functions will be disabled.

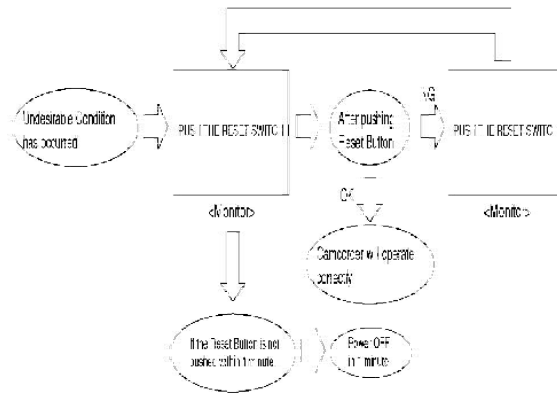
- We recommend using the SP mode for important recordings.
- In order to fully exhibit the performances of the LP mode, we recommend using Panasonic cassettes marked LP mode.
- Audio dubbing is not possible with LP Mode. (p. 55)
- In the LP mode, the picture quality will not be degraded in comparison with the SP mode, but mosaic noise may appear on the playback image or some functions may be disabled.
 - Playback on other digital video equipment or on digital video equipment without the LP mode.
 - Playback of the image on other digital video equipment recorded in the LP mode.
 - Slow Motion/Still Advance playback.

6. Service Mode

6.1. Error Display

"PUSH THE RESET SWITCH" is displayed automatically on the EVF or the LCD Monitor when an undesirable condition has occurred.

Fig. 1



Note:

When "PUSH THE RESET SWITCH" is displayed repeatedly, service is required. Check the Error Code which is listed in the Service Menu.

6.2. Service Menu

When abnormal detection contents are confirmed, do the following operation. Automatic diagnosis code will be displayed. (Service Menu)

To enter the Service Menu

Push the [PHOTO SHOT], [JOYSTICK CONTROL LEFT] and [RECORDING START/STOP] simultaneously for 3 seconds (with no SD Card inserted).

Note:

If a Disc or SD Card is inserted, the above operation will not work. This operation displays the following Service Menu items.

To select the Item

1. Set to Service Menu.
2. Press the [JOYSTICK CONTROL UP/DOWN] to select item [3].
3. Press the [JOYSTICK CONTROL RIGHT] to display [YES/NO] screen.
4. Press the [JOYSTICK CONTROL UP/DOWN] to select [YES].
5. Press the [JOYSTICK CONTROL CENTER].

Note:

Only perform items 3 in the Service Menu.

To exit the Service Menu

Unplug the AC Cord.

Fig. 2

0000	0118	00	0000	000
1			BC	
2			BC	
3			BC	
4			BC	
5			BC	

<Service Menu 1/2>

- Item (1) : Factory setting reset
 Item (2) : Reel Mode
 Item (3) : Error Lock Code elapsed time
 Item (4) : Envelope HID
 Item (5) : SER

ignore
 ignore

0000	00000000	0000	0000
6			NO
7			NO
8			NO
9			NO

<Service Menu 2/2>

- Item (6) : AD 24cm data
 Item (7) : Not used
 Item (8) : Resets the Cylinder elapsed time
 Item (9) : Not used

ignore

<time [3] screen>

0118 0000 0000 0000 0000 0000 0000 0000
 0118 0000 0000 0000 0000 0000 0000 0000
 0118 0000 0000 0000 0000 0000 0000 0000

the lock code before last
 last lock code
 current lock code

ignore ignore ignore

Mechanism lock code records (See below)
 Lens motor lock code records (See below)

↓

Mechanism Lens motor lock code

DISPLAY	Explanation of cause
01	Reel Lock
02	Stale Lock
03	Unloading Lock
04	Loading Lock
05	Cylinder Lock
51	Zoom Motor Lock
52	Focus Motor Lock

-Cylinder elapsed time (in Base 16)
 Calculation method of the Cylinder elapsed time:
 (For example: "0001234F" is displayed)
 0001234F (in Base 16) = 74574 (in Base 10)
 74574 x 4.5 (seconds) = 335577 (seconds)
 335577 ÷ 3600 (seconds) = 93.2 (hours)
 ←fixed value

7. Service Fixture & Tools

7.1. Service Fixture and Tools

Color Bar Standard Tape (Keeping condition: keep at 15 °C ~ 28 °C)	VFM3010EDS	DVC Head Cleaning Tape	VFK11451 Plier for Non ZIF Connector	LSVQ0028
Grease	LSUQ0050	Extension Cable 8P (2 pcs)	LSUA0019 Extension Cable 10P (2 pcs)	LSUA0018
Extension Cable 18P (2 pcs)	LSUA0017	Extension Cable 22P	VUVS0012 Extension Cable 26P	VUVS0015
Extension Cable 90°	LSUA0060			
Light Box and AC Adaptor	VFK1164LBR1	Infinity Lens (with Focus Chart)	VFK1164TCM02 27mm Ring VFK1164TAR27	Color Conversion Filter (C14) VFK1164TFC22

7.2. Service Position

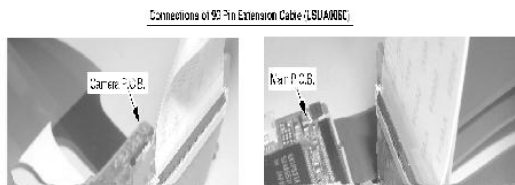
7.2.1. Extension Cables for Service Position

Using the following Extension Cables, place the unit as shown for check and service.

NO.	PART NUMBER	PART NAME	CONNECTION
①	_LSUA0016	11Pin Extension Cable	(FP01 on Main P.C.B. ~ Zoom Switch F.P.C. of Cassette Cover Unit)
②	_HUVS0012	22Pin Extension Cable	(FP002 on Camera P.C.B. ~ EVF F.P.C. on EVF Unit)
③	_LSUA0060	90Pin Extension Cable	(B1 on Main P.C.B. ~ B0201 on Camera P.C.B.)
④	_HUVS0016	22Pin Extension Cable	(FP6 on Main P.C.B. ~ LCD F.P.C. or LCD Unit)
⑤	_LSUA0017	16Pin Extension Cable	(FP4 on Main P.C.B. ~ Cassion F.P.C. or Mechanism Chassis Assy)
⑥	_LSUA0017	16Pin Extension Cable	(FP2 on Main P.C.B. ~ Sub Mechanism F.P.C. or Mechanism Chassis Assy)
⑦	_LSUA0018	10Pin Extension Cable	(FP5 on Main P.C.B. ~ Grinder F.P.C. on Mechanism Chassis Assy)
⑧	_LSUA0019	8Pin Extension Cable	(FP7 on Main P.C.B. ~ Mechanism F.P.C. on Mechanism Chassis Assy)
⑨	_LSUA0019	8Pin Extension Cable	(FP6 on Main P.C.B. ~ Head Assy F.P.C. on Mechanism Chassis Assy)

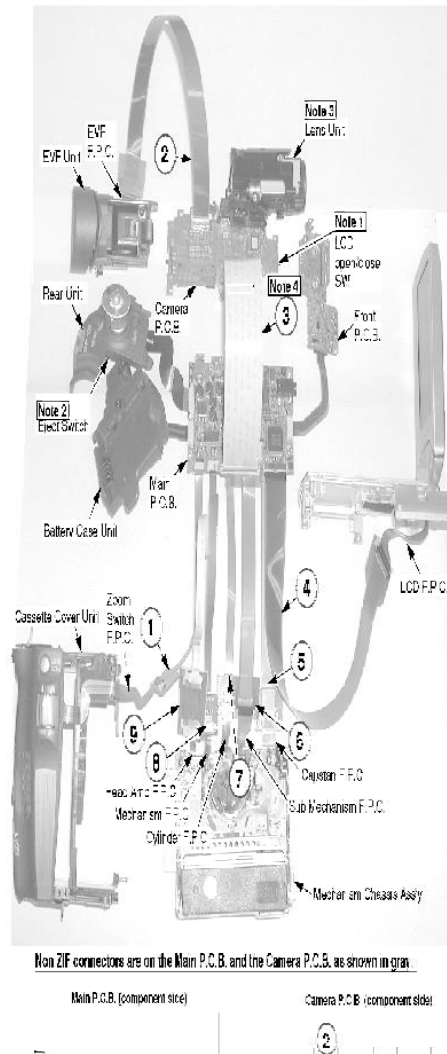
Note:

1. The LCD open/close Switch is for changing between LCD Display and EVF Display. When turning on EVF Display, place some paper or tape, etc. on LCD open/close Switch so that this Switch stays ON.
2. To eject the Mechanism, hold down the Eject Switch on the Rear Unit for a short time.
3. Use a grounded ESD wrist strap while disassembling the Lens portion.
4. Connect the F.P.C.s to the connectors, verifying the direction of F.P.C.s. The Main P.C.B. or a Chip part will be especially damaged if the 90 Pin Extension Cable (LSUA0060) is misconnected.



5. Use extreme care when plugging or unplugging in connectors.

Fig. 3



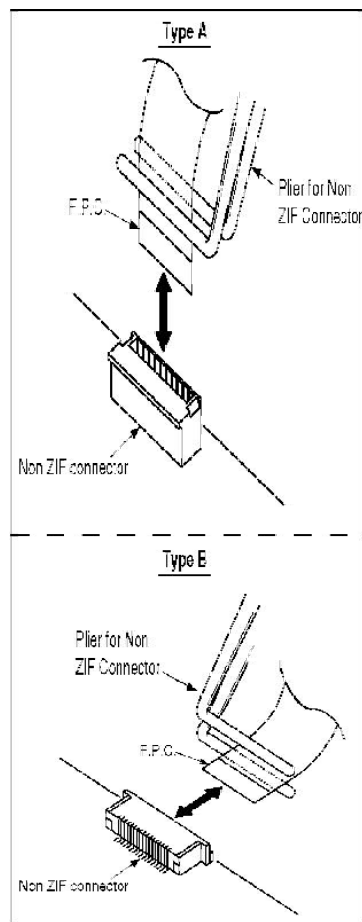
7.3. Removal/Installation of F.P.C. From Non ZIF (Zero Insertion Force) Connector

Removal/Installation of F.P.C. from the Non ZIF (Zero Insertion Force) connector:

1. The Non ZIF connectors and the ZIF connectors are used on the unit. And there are 2 types (Type A, Type B) of Non ZIF connectors.
2. To remove the F.P.C. from the Non ZIF connector, use the Plier for Non ZIF Connector (LSVQ0028) to pull out the F.P.C. as shown. The same

Plier for Non ZIF Connector (LSVQ0028) should also be used to install the F.P.C. to the Non ZIF Connector.

Fig. 4-1



3. Connect the F.P.C.s to the Non ZIF connectors, verifying the direction of F.P.C as shown.

Fig. 4-2

The diagram illustrates the component side of two printed circuit boards (P.C.B.s). The top section, labeled 'Camera P.C.B. (component side)', shows components 1, 2, 3, and 4. Component 2 is a large rectangular component with a grid of pins. Component 3 is a smaller rectangular component. Component 4 is a small circular component. The bottom section, labeled 'Main P.C.B. (component side)', shows components 1 through 9. Component 1 is a large rectangular component with a grid of pins. Component 2 is a smaller rectangular component. Component 3 is a small circular component. Component 4 is a small rectangular component. Component 5 is a small rectangular component. Component 6 is a small rectangular component. Component 7 is a small rectangular component. Component 8 is a small rectangular component. Component 9 is a small rectangular component. Arrows indicate connections between the two boards.

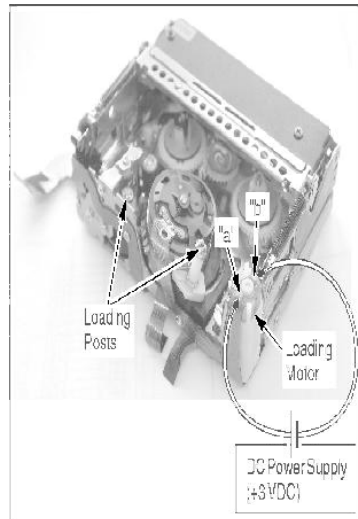
CAUTION:

Apply +3 VDC Power Supply to the Loading Motor terminals.

DC (-) to Portion "a," DC (+) to Portion "b"

DC (+) to Portion "a," DC (-) to Portion "b"

34



7.5. EEPROM Data

CAUTION:

Be sure to save the EEPROM data using PC-EVR Adjustment Program before service and adjustment in order to make sure to avoid an accidental data loss, etc. using PC-EVR Adjustment Program by first.

EEPROM IC	
C.B.A.	EEPROM IC Ref. No.
Main C.B.A.	C6003

7.6. Replacement Procedures for CSP (Chip Size Package) IC

7.6.1. EQUIPMENT

1. Pre-Heater
2. Spot Heater
3. Vacuum Pick-up
4. P.C.B. Holder

Fig. 8-1

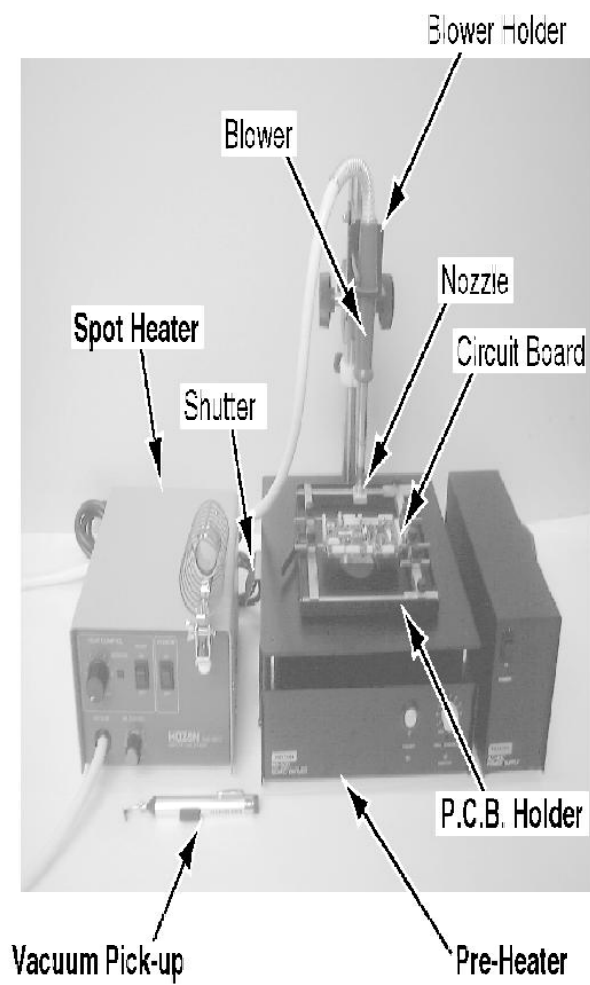
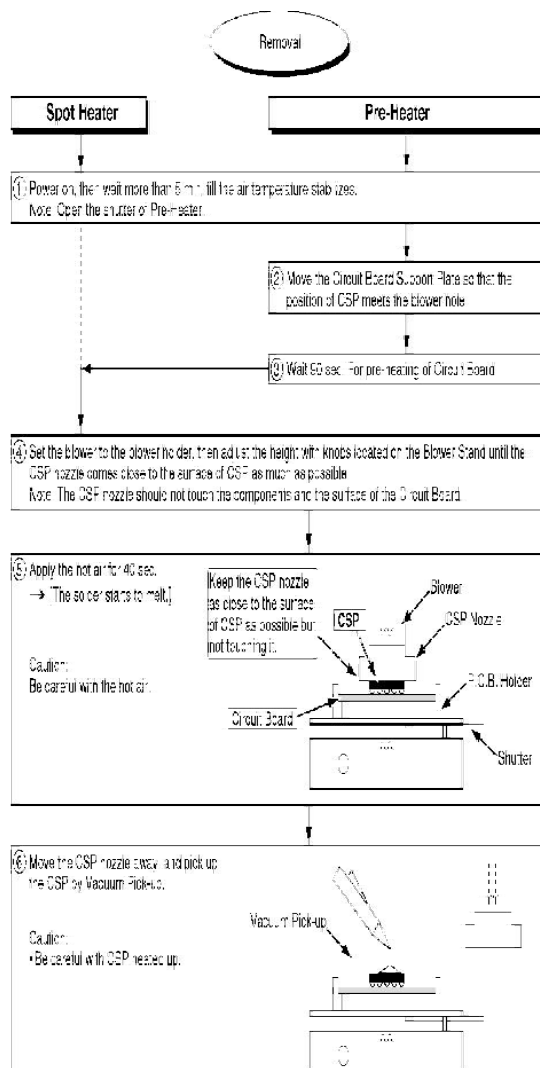


Fig. 8-2

7.6.2. Removal of CSP IC

Fig. 8-3



7.6.3. Installation of CSP IC

Fig. 8-4

A. Cleaning

Mounting of CSP

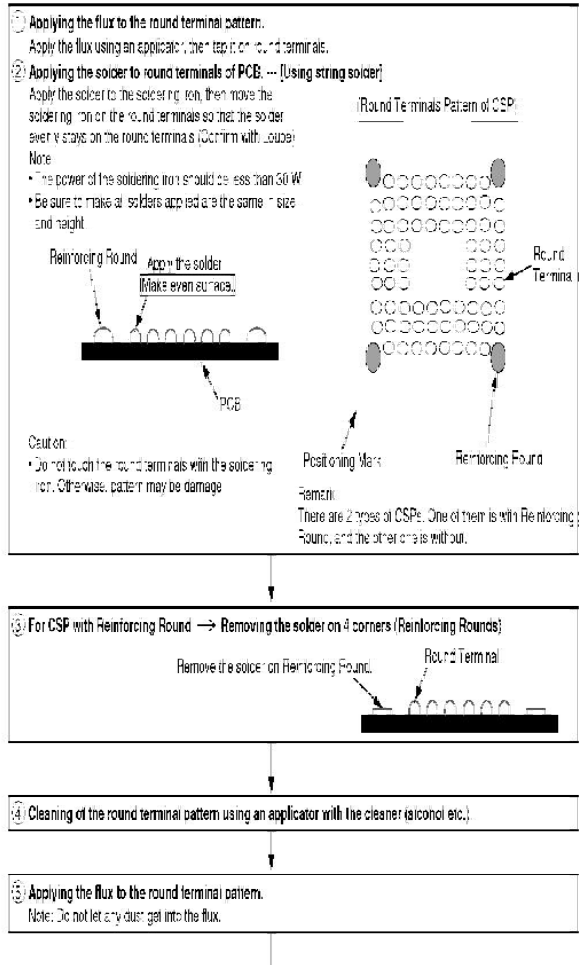
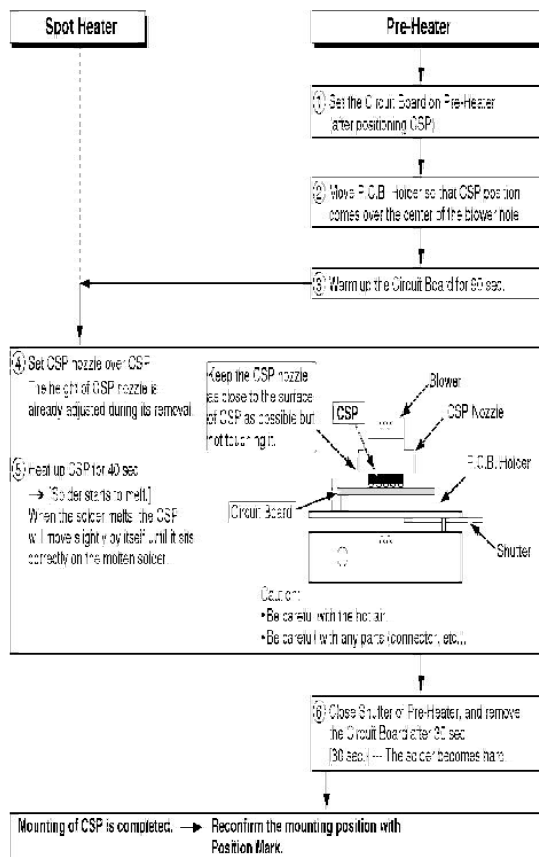


Fig. 8-5

C. Mounting

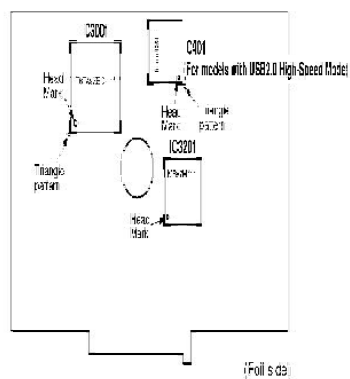
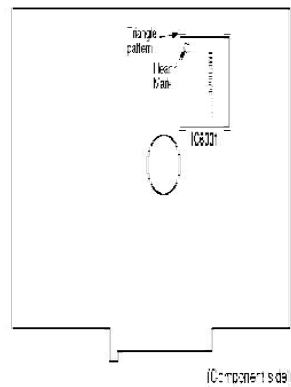


That's all for CSP repair, and the final confirmation if the repair work is OK or not should be made by assembling the repaired Circuit Board into the camera unit.

7.6.4. CSP IC Location

Make sure to install CSP IC in the correct position on the Main P.C.B. as shown.

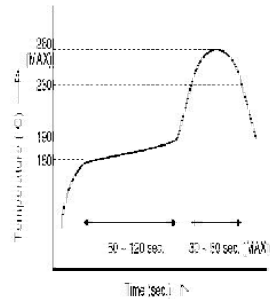
Main P.C.B.



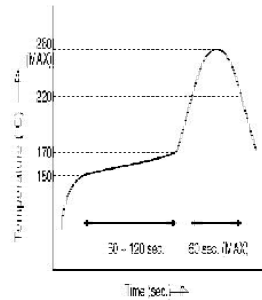
7.6.5. Temperature Profile for Heat Resistance of CSP IC

Refer to the temperature profile. CSP ICs in the 2006 model have the following temperature profile.

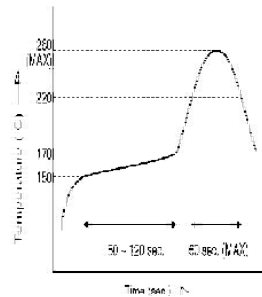
IC600



IC320



IC300



IC400



7.7. Special Note

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" section of this service manual.

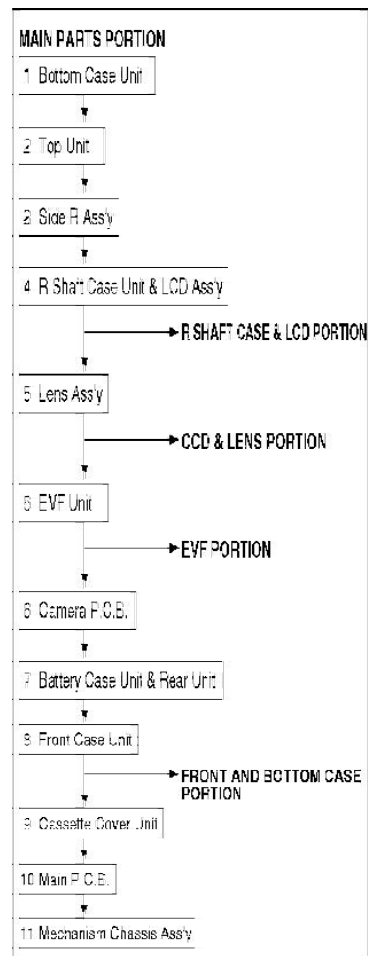
8. Disassembly and Assembly Instructions

8.1. Cabinet Section

8.1.1. DISASSEMBLY FLOWCHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When

reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.



Note:

- 1. When removing the cabinet, work with care so as not to break the Locking Tabs.**
- 2. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.**
- 3. When reinstalling, ensure that the connectors are connected and electrical components have not been damaged.**
- 4. Do not supply power to the unit during disassembly and reassembly.**

8.1.2. Disassembly Method

8.2. Mechanism Section

Flow-Chart for Disassembly Procedures

No.	Item / Part	Fig.	Removal (Screw, Connector, Flex, & Other)
1	Cassette Jo Unit	Fig. M1 Fig. M2 Fig. M3 Fig. M4	1. makes the mechanism position in Eject condition (For Battery) 3-Screws (A) 3-Tabs 1. remove the piece arrangement unit from the department
2	Cylinder Unit	Fig. M5 Fig. M6 Fig. M6	1-Screw (B) 3-Screw (C) Cylinder Unit

Fig. M1

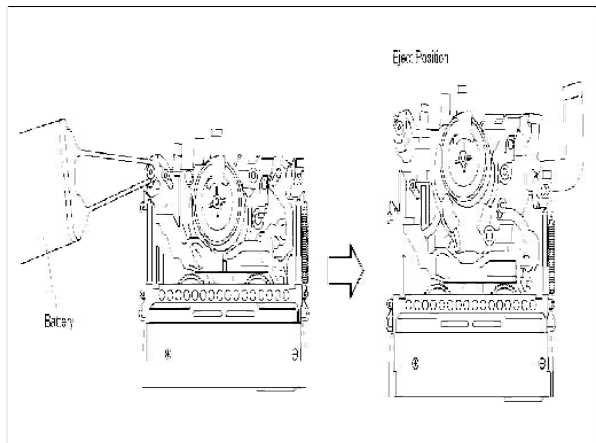


Fig. M2

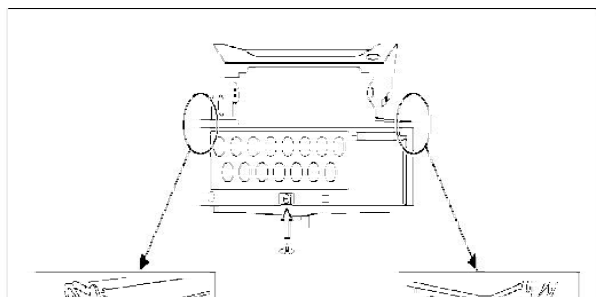


Fig. M3

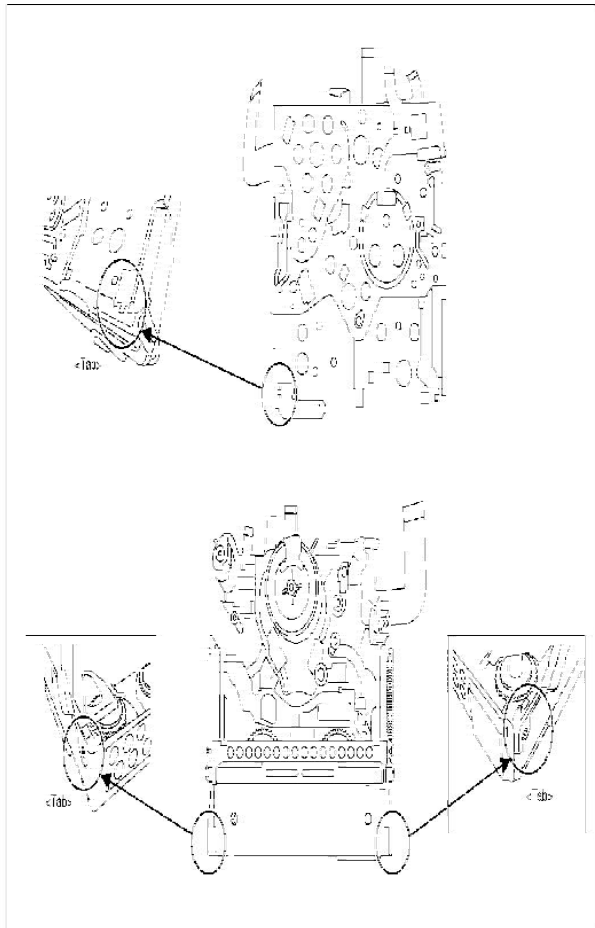


Fig. M4



Fig. M5

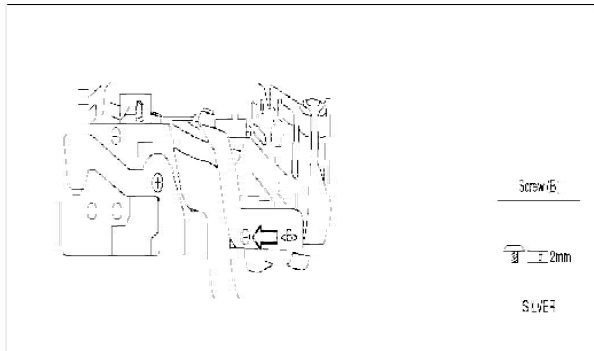
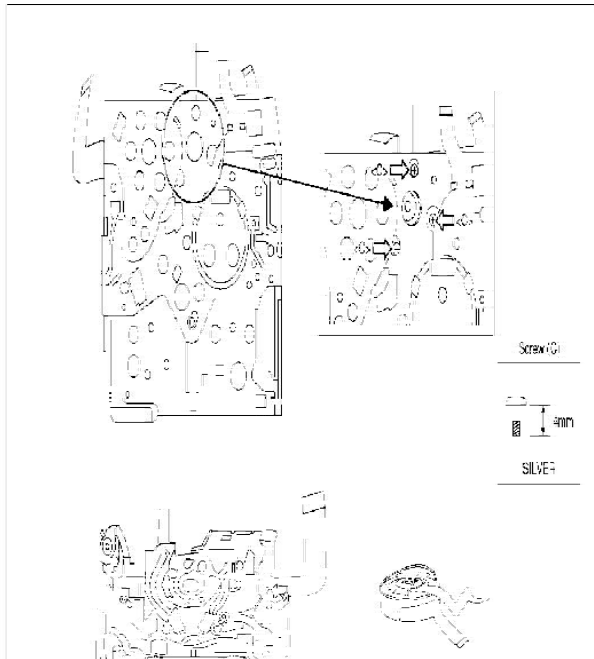


Fig. M6



9. Measurements and Adjustments

9.1. Mechanical Adjustment

9.1.1. ENVELOPE OUTPUT ADJUSTMENT

When replacing the Main Chassis Unit or the Cylinder Unit, be sure to perform the Envelope Output Adjustment as shown below.

1. Remove the Bottom Case Unit, Top Unit and Side R Ass'y (Refer to “.”).
2. Connect the 90 Pin Extension Cable (LSUA0060) between Connector B1 on the Main P.C.B. and B9901 on the Camera P.C.B.
3. Connect the AV Cable to the Camcorder.

4. Connect the oscilloscope to VIDEO OUT plug "Envelope" and AUDIO R plug "HID."
5. Enter the Service Menu (Refer to “,” and select item [4].
6. Playback the Color Bar Standard Tape (VFM3010EDS). "Envelope" and "HID" will be output.
7. Adjust the S1 post by turning the top of post with Post Height Adjustment Fixture so that the left half of envelope signal becomes flat as possible.
8. Adjust the T1 post by turning the top of post with Post Height Adjustment Fixture so that the right half of envelope signal becomes flat as possible.

Fig. E1-1

1	2	3	4	5
1				
2				
3				
4				
5				

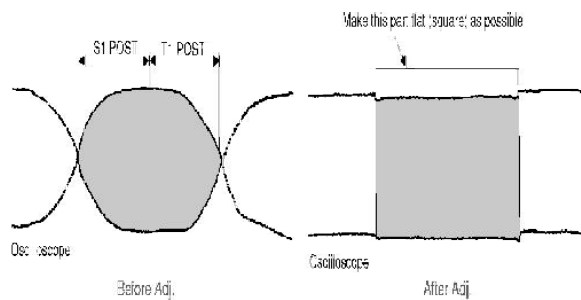
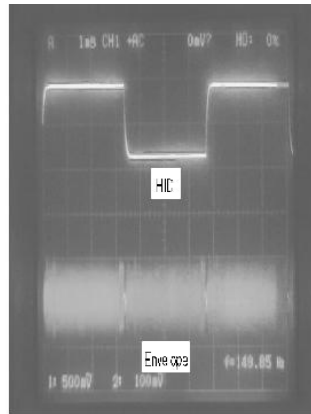
Enter:
[PHOTO SHOT], [JOYSTICK CONTROL LEFT] and
[RECORDING START/STOP] (or more than 3 seconds)

Exit:
Power OFF

<Service Menu 1/2>



Fig. E1-2



Note
 After the adjustment, be sure to confirm BER (Bit Error Ratio) using EVA Adjustment Software.
 If it is NG, try this adjustment once again.

9.2. Electrical Adjustment

9.2.1. Initial Guideline

The table below shows which adjustments are necessary according to the unit parts and individual parts to be replaced. Make sure to perform these adjustments shown below as necessary.

Adjustment Item		Replacement Parts									
		MAIN P.C.B.	IC302P (CAMERA SIGNAL PROCESS)	IC701 (FOCUS/ ZOOM MOTOR DRIVE & INITIAL AMP CONTROL)	IC8001 (CAMERA DIGITAL SIGNAL PROCESS/SIGNALING)	IC8101 (VIDEO/AUDIO SIGNAL PROCESS)	IC86001 (SYSTEM MICROCONTROLLER)	IC86003 (EEPROM)	CAMERA P.C.B.	LCD P.C.B.	IC8001LCD RGB/ EVF SIGNAL PROCESS)
Camera	CAM half amplifier and Iris PWM	○	○			○	○				○
	CAM Zoom Tracking and De-focus	○				○	○				○
	CAM WB coarse	○	○		○	○	○				○
	CAM AWB S100	○	○		○	○	○				○
	CAM AWB E100	○	○		○	○	○				○
	CAM Revision CCD scratch	○				○	○				
Video	VCR Sensitivity adj of Tape sensors	○				○					○
	VCR PG shutter adjustment	○				○					○
	VCR Luminance level	○			○	○					
	VCR Chroma level	○			○	○					
LCD	_CD Contrast					○	○			○	
	_CD Bright					○	○			○	
	_CD Sub Bright					○	○			○	
	_CD VCOM level (For model without Wide _CD)					○	○			○	
EVF	EVF Horizontal free running					○	○			○	

9.2.2. Installation of USB-SERIAL driver

Execute the "Setup.exe" file in "ComMass" folder by double clicking to install the USB-SERIAL driver.

9.2.3. COM Mode

If a Disc or SD Card is inserted, remove before operation.

To enter the PC connection (COM) mode, push the [PHOTO SHOT], [RECORDING START/STOP] and [JOYSTICK CONTROL UP] simultaneously for 3 seconds without connecting the USB Cable.

9.2.4. SET UP OF PC-EVR ADJUSTMENT PROGRAM

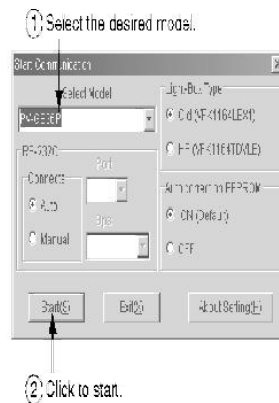
1. Turn on the PC and install the PC-EVR Adjustment Program into the PC.

2. Execute the "kdv2006.exe" file by double clicking to start up the PC-EVR Adjustment Program.

The main menu will be displayed.

3. Select the appropriate model.

4. Turn on the camcorder and set to PC connection (COM) mode. Then click "Start".



5. When the communication is complete, the dialog will appear.

Click "Yes," and "Save" to save the EEPROM data.

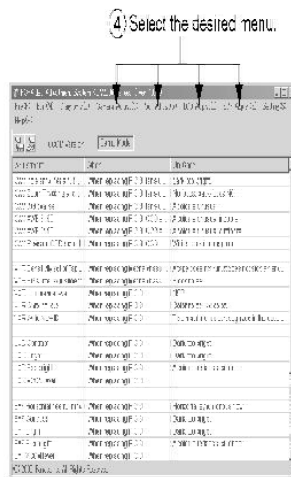
Fig. E2-2



6. When saving EEPROM data is complete, the menu will appear.

To perform each adjustment, display the adjustment menu by selecting from "Camera Adjust," "Vcr Adjust," "LCD Adjust" or "EVF Adjust" and select each adjustment item.

Fig. E2-3

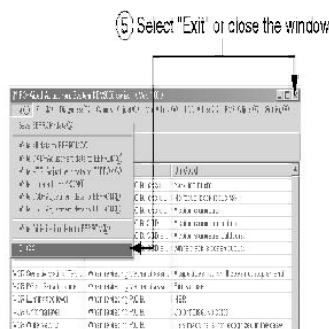


Note:

The adjusted data is stored in the EEPROM IC after each adjustment.

7. After adjustment, to close the software, select "Exit" in the File menu or close the window.

Fig. E2-4



8. To release the PC connection (COM) mode, push the [PHOTO SHOT], [RECORDING START/STOP] and [JOYSTICK CONTROL UP] simultaneously for 3 seconds without connecting the USB Cable.

10. Maintenance

10.1. Cleaning Lens, Viewfinder and LCD Panel

Do not touch the surface of the lens, Viewfinder and LCD Panel with your hand.

When cleaning the lens, use air-blower to blow off the dust.

When cleaning the LCD Panel, dampen the lens cleaning paper with lens cleaner, and gently wipe the surface.

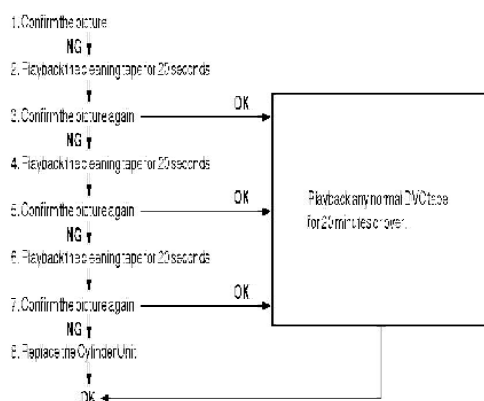
Note:

Lens cleaning paper and lens cleaner are available at camera shops, etc.

10.2. How to use the DVC Head Cleaning Tape / VFK1451

Please use the cleaning tape as described below.

Notes: This cleaning tape has a total playback time of 2 minutes 30 seconds. It can be used 30 times.



The picture will look like this in case of logged video read.



11. Block Diagrams

12. Schematic Diagrams

12.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

12.2. MAIN SCHEMATIC DIAGRAMS

12.3. CAMERA SCHEMATIC DIAGRAM

12.4. FRONT SCHEMATIC DIAGRAM

12.5. LCD BACKLIGHT SCHEMATIC DIAGRAM (Model: PV-GS29PL)

12.6. LCD BACKLIGHT SCHEMATIC DIAGRAM (Models: PV-GS39PL/PV-GS69PL)

12.7. EVF BACKLIGHT / CASSETTE COVER / BATTERY CASE SCHEMATIC DIAGRAMS

12.8. CCD / REAR / LCD SW SCHEMATIC DIAGRAMS

12.9. INTERCONNECTION SCHEMATIC DIAGRAM

12.10. VOLTAGE CHART

13. Printed Circuit Board

13.1. MAIN P.C.B.

13.2. CAMERA P.C.B.

13.3. FRONT P.C.B.

13.4. LCD BACKLIGHT P.C.B. (Model: PV-GS29PL)

13.5. LCD BACKLIGHT P.C.B. (Models: PV-GS39PL/PV-GS69PL)

14. Appendix Information of Schematic Diagram

14.1. CHECKING POINT TABLE OF THE CSP IC

14.2. WAVEFORM TABLE

15. Exploded Views

15.1. MAIN PARTS SECTION

Exploded view diagram of the HP-3022P printer assembly. The diagram shows the following components and sub-assemblies:

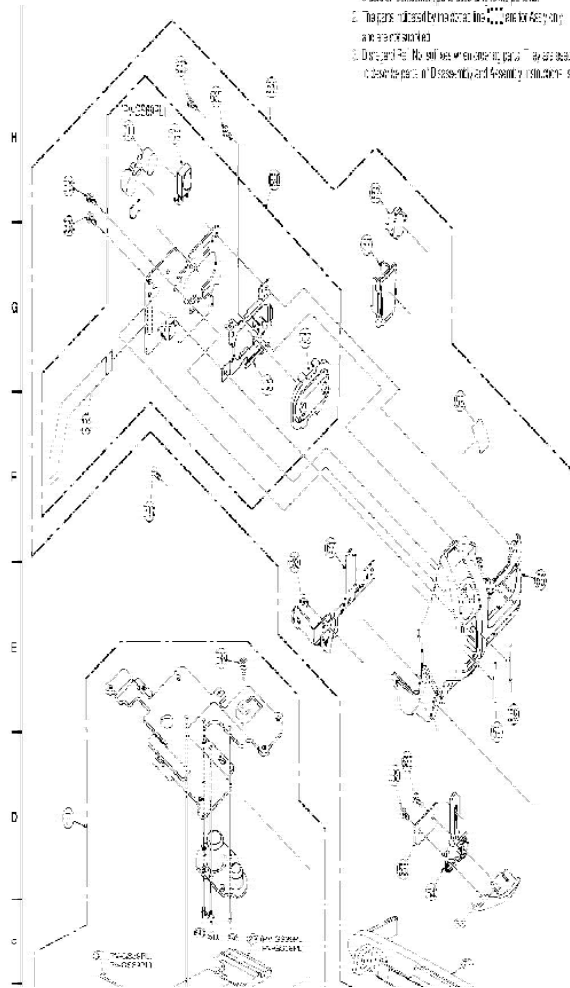
- Carriage Assembly:** Located at the top left, including the carriage body (1), carriage motor (2), and carriage support (3).
- Paper Support Assembly:** Located at the top right, including the paper support frame (4), paper support motor (5), and paper support roller (6).
- Base Assembly:** Located at the bottom left, including the base frame (7), base motor (8), and base support (9).
- Internal Components:** Various internal parts like gears, belts, and rollers are shown with callouts such as 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- Assembly Instructions:**
 - 1. The parts and sub-assemblies shown in this diagram are not to be assembled.
 - 2. Disassemble the HP-3022P printer into its components.
 - 3. Assemble the HP-3022P printer into its components.

Notes

1. Please note that, in the 2009-2010 year, we requested and were refused an interview. Because of this, your cover letter and comments should refer to the paper as if the paper address the comments.*** (For the 2010-2011 year, we are not requesting)
2. Do not refer to the studies as "our paper." The reviewer does not refer to "Dassanayake and Aschew's publications section"

2 FRONT AND BOTTOM CASE SECTION

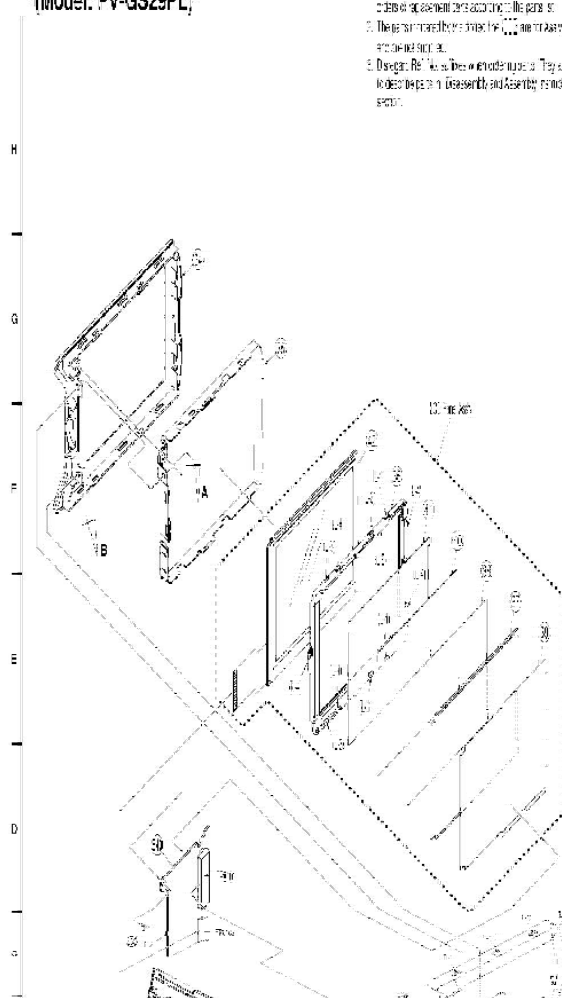
- Note:**
1. Parts with the label in EXPLODED VIEW are exploded.
 2. Dimensions are in millimeters. The unit of measurement is in millimeters.
 3. The parts are exploded according to the exploded view.
 4. Dimensions are in millimeters. The unit of measurement is in millimeters.
 5. Dimensions are in millimeters. The unit of measurement is in millimeters.



15.3. SIDE CASE R AND LCD SECTION

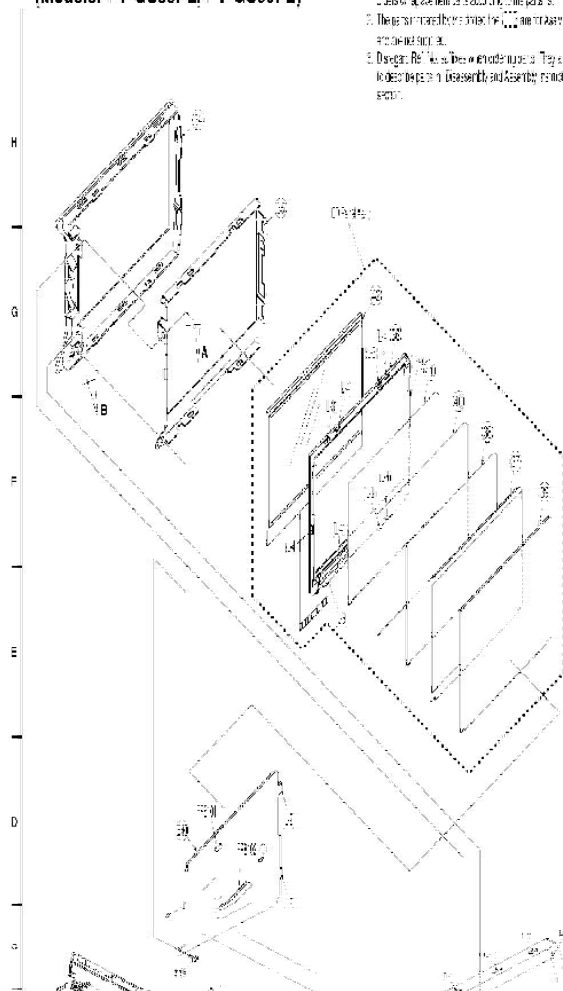
R SHAFT CASE UNIT AND LCD SECTION **(Model: PV-GS29PL)**

- Note**
1. Parts with the Ref. No. in "EXPLODED VIEW" are not supplied. As shown in Fig. 10, they will be attached to the shaft case from outside or placed inside according to the parts list.
 2. The parts marked by a circle in the "EXPLODED VIEW" are not supplied from outside.
 3. Design Ref. No. is the same as the type of the shaft case. To check the parts in "Disassembly and Assembly" is the same as the type.



R SHAFT CASE UNIT AND LCD SECTION (Models: PV-GS39PL, PV-GS69PL)

- Note**
1. Parts with the Ref. in the EXPLODED VIEW are not supplied. As shown in the Ref. will be selected. Be careful to use the correct replacement parts according to the parts list.
 2. The parts marked by a circle in the EXPLODED VIEW are not supplied.
 3. Design Ref. No. is the same as the type of the parts. They are also marked by the Ref. in the Assembly and Assembly Reference section.



15.4. CCD AND LENS SECTION

4 CCD AND LENS SECTION

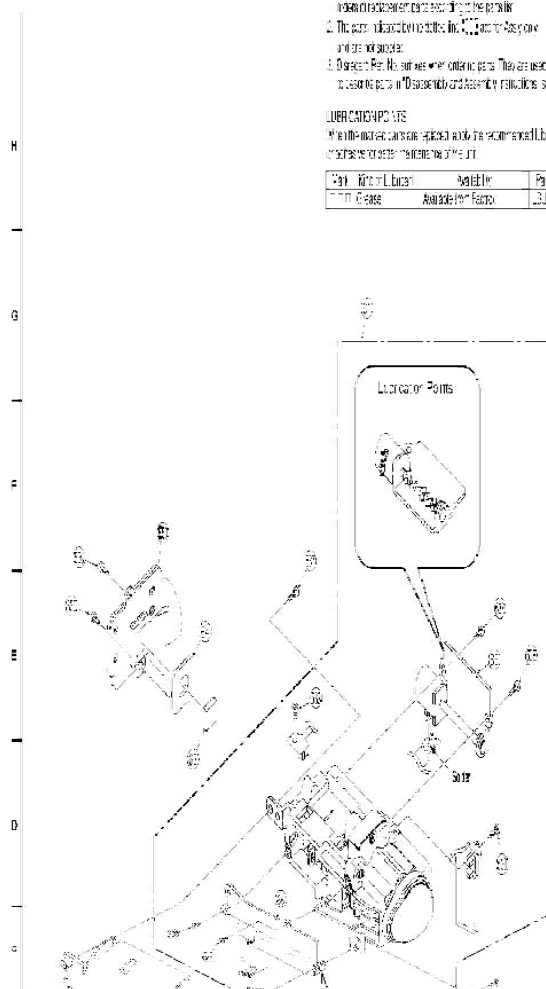
Notes:

1. Parts with the label INTERLOCKED MECHANISM are indicated by orange Part Numbers. Orange is a warning color indicating that the parts are interlocked.
2. The parts indicated by the label INTERLOCKED MECHANISM are not to be used in the assembly.
3. Orange Part Numbers are not indicated. They are used to indicate parts in the assembly and assembly functions section.

LOCKING POINTS

1. The locking points are indicated by the orange Part Numbers.
2. The parts are not to be used in the assembly.

Part	Part Number	Part Name	Part Value
1	1000000000	Assembly Case	3.000000

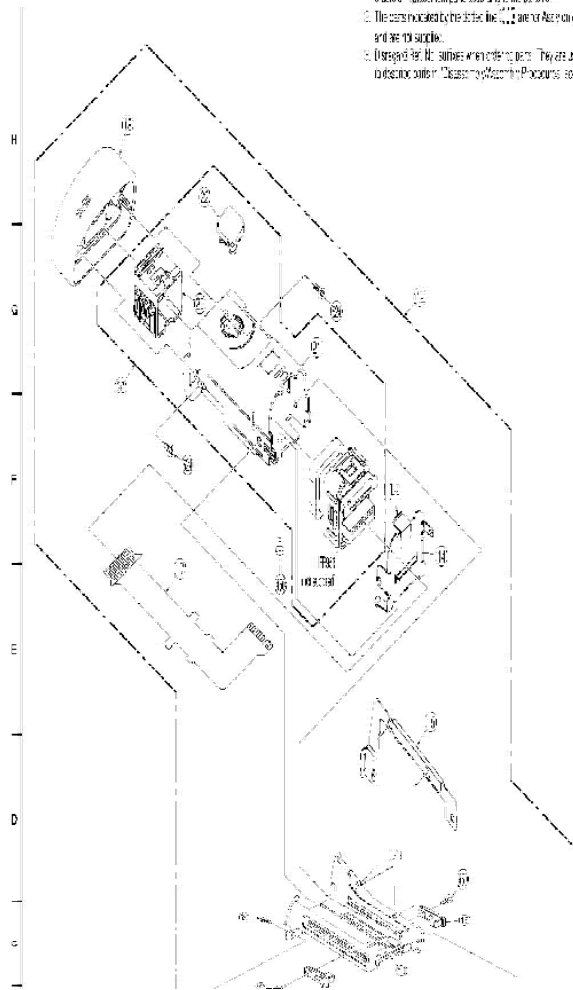


15.5. EVF SECTION

5 EVF SECTION

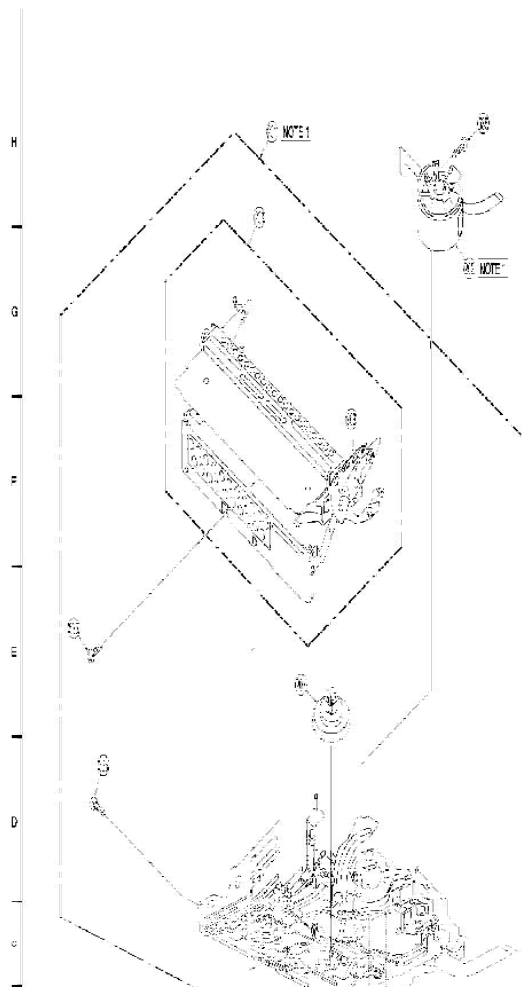
Note:

1. Parts were checked in the EMPLOYEE EVF (employee) and some parts were not subject to the same parts as the other parts.
2. The parts marked with the letter "A" are for the parts and are to supply.
3. Disposed for the parts when the parts are not used in the parts in the Assembly Process section.



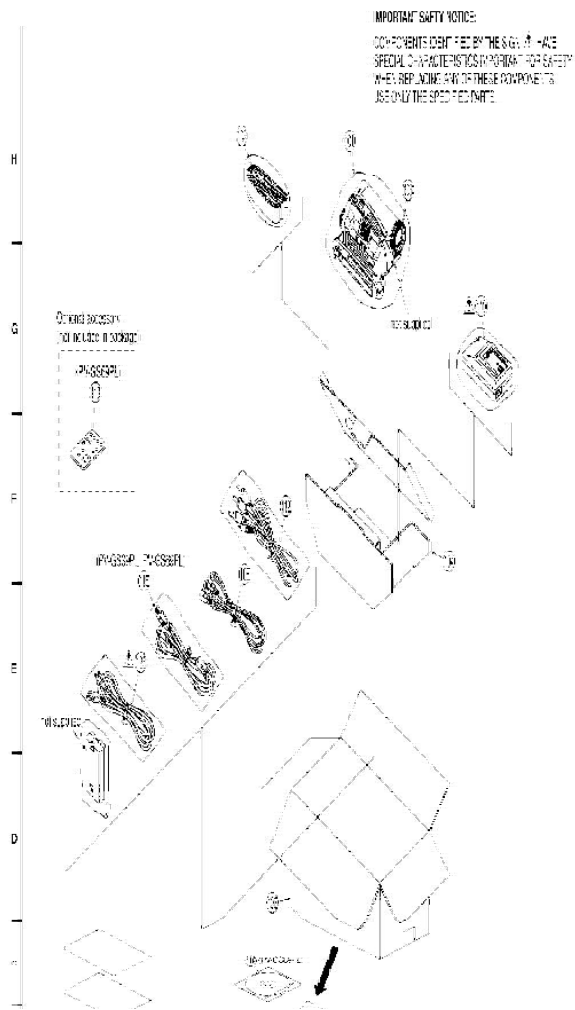
15.6. MECHANISM SECTION

⑥ MECHANISM SECTION



15.7. PACKING PARTS AND ACCESSORIES SECTION

7 PACKING PARTS AND ACCESSORIES SECTION



16. Replacement Parts Lists

BEFORE REPLACING PARTS, READ THE FOLLOWING:

1. Use only original replacement parts:

To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. IMPORTANT SAFETY NOTICE

Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. Definition of Parts supplier:

- A. Parts with mark "SPC" in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.**
- B. Parts with mark "PSEC" in the Remarks column are supplied from PSEC.**
- C. Parts without mark in the Remarks column are supplied from PSECI.**

4. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

5. Unless otherwise specified;

All resistors are in Ω , K = 1,000 Ω , M = 1,000 k .

6. Abbreviation

RTL: Retention Time Limited

This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.

NR: Non Repairable Board Ass'y

MGF CHIP: Metal Glaze Film Chip

C CHIP: Ceramic Chip

COMPLX CMP: Complex Component

W FLMPRF: Wirewound Flameproof

C.B.A.: Circuit Board Assembly

P.C.B.: Printed Circuit Board

E.S.D.: Electrostatically Sensitive Devices

CSP: Chip Size Package

7. AC Adaptor replacement note:

AC Adaptor used on these movie camera is PV-DAC14D.

However, DE-974FA is supplied as a replacement part for PV-DAC14D.

16.1. MECHANICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

- 1. Parts with mark "SPC" in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.**
- 2. Parts with mark "PSEC" in the Remarks column are supplied from**

PSEC.

3. Parts without mark in the Remarks column are supplied from PSECI.

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
<u>2</u>	LSYK1699	CASSETTE COVER UNIT	PV-GS29PL
<u>2</u>	LSYK1694	CASSETTE COVER UNIT	PV-GS39PL,PV-GS69PL
<u>7</u>	LSYK1693	BOTTOM CASE UNIT	PV-GS29PL
<u>7</u>	LSYK1692	BOTTOM CASE UNIT	PV-GS39PL,PV-GS69PL
<u>9</u>	LSKM1193	LENS COVER	
<u>10</u>	LSGF0544	LIGHT PROTECTOR	
<u>12</u>	LSXK0235	EVF UNIT	RTL
<u>13</u>	LSKM1165	EVF BASE FRAME	
<u>14</u>	LSMA0721	EVF SPRING	
<u>15</u>	LSSC0833	EVF EARTH PLATE	
<u>16</u>	LSMD0799	EVF SLIDE PIECE	
<u>17</u>	LSJB8305	EVF FLEXIBLE PRINTED CIRCUIT	
<u>18</u>	LSGQ0182	EYE CAP	
<u>19</u>	LSKM1164	EVF FRAME	
<u>20</u>	LSYK1533	EVF CASE 1 UNIT,ABS RESIN	
<u>21</u>	LSKM1024	EVF CASE,ABS RESIN	
<u>22</u>	LSGT0068	EYE SIGHT LEVER	
<u>23</u>	LSYK1415	EVF LENS UNIT	
<u>24</u>	LSYK1712	MECHA FRAME UNIT	
<u>26</u>	LSYK1668	BATTERY CASE UNIT	
<u>27</u>	LSYK1697	REAR UNIT	PV-GS29PL
<u>27</u>	LSYK1695	REAR UNIT	PV-GS39PL,PV-GS69PL
<u>28</u>	LSKF0666	BOTTOM JACK COVER	
<u>29</u>	LSKF0656	SD COVER	PV-GS39PL,PV-GS69PL
<u>30</u>	LSGQ0183	SD COVER SHAFT	PV-GS39PL,PV-GS69PL
<u>31</u>	LSYK1673	R SHAFT CASE UNIT	PV-GS29PL
<u>31</u>	LSYK1672	R SHAFT CASE UNIT	PV-GS39PL,PV-GS69PL
<u>33</u>	LSYK1677	LCD CASE A UNIT	PV-GS29PL
<u>33</u>	LSYK1676	LCD CASE A UNIT	PV-GS39PL,PV-GS69PL
<u>34</u>	LSKM1173	LCD CASE B	PV-GS29PL
<u>34</u>	LSKM1174	LCD CASE B	PV-GS39PL,PV-GS69PL
<u>35</u>	LSXY0939	LCD SHIELD CASE UNIT	PV-GS29PL
<u>35</u>	LSXY0941	LCD SHIELD CASE UNIT	PV-GS39PL,PV-GS69PL
<u>36</u>	LSXY0940	PANEL HOLDER UNIT	PV-GS29PL
<u>36</u>	LSXY0942	PANEL HOLDER UNIT	PV-GS39PL,PV-GS69PL
<u>37</u>	LSGL0422	LEAD LIGHT PANEL	PV-GS29PL
<u>37</u>	VKW3296	LEAD LIGHT PANEL	PV-GS39PL,PV-GS69PL
<u>38</u>	LSGL0404	DIFFUSION SHEET	PV-GS29PL
<u>38</u>	LSGL0445	DIFFUSION SHEET	PV-GS39PL,PV-GS69PL
<u>39</u>	LSGL0423	REFLECT SHEET	PV-GS29PL

Ref. No.	Part No.	Part Name & Description	Remarks
39	LSGL0446	REFLECT SHEET	PV-GS39PL,PV-GS69PL
40	LSGL0406	BEF SHEET	PV-GS29PL
40	LSGL0443	BEF SHEET	PV-GS39PL,PV-GS69PL
41	LSGL0421	BEF SHEET A	PV-GS29PL
41	LSGL0444	BEF SHEET A	PV-GS39PL,PV-GS69PL
42	L5BDDYH00015	LIQUID CRYSTAL DISPLAY PANEL	PV-GS29PL
42	L5EDDYH00007	LIQUID CRYSTAL DISPLAY PANEL	PV-GS39PL,PV-GS69PL
43	LSQL2004	SERVICE LABEL	PV-GS29PL
50	LSYK1687	TOP UNIT	PV-GS29PL,PV-GS39PL
50	LSYK1686	TOP UNIT	PV-GS69PL
51	LSYK1670	FRONT CASE UNIT	PV-GS29PL,PV-GS39PL
51	LSYK1671	FRONT CASE UNIT	PV-GS69PL
52	LSMD0822	LED LIGHT LENS	
53	LSKF0653	FRONT JACK COVER	
54	LSMD0832	FRONT COVER HINGE	
55	LSMF0470	FRONT HINGE COVER PIECE	
56	LSKM1163	FRONT CASE	
57	LSGL0441	IR PIECE	
58	LSMZ0409	FRONT BOTH SIDE TAPE A	
59	LSMZ0410	FRONT BOTH SIDE TAPE B	
61	LSXN0042	LENS UNIT	
63	VDL1390-B	OPTICAL LOW PASS FILTER	
64	VMX3282	FILTER RUBBER	
65	L6HA66NB0003	ZOOM MOTOR UNIT	
66	L6HA66NB0006	FOCUS MOTOR UNIT	
67	LSMA0882	FRONT STRAP ANGLE	
68	LSMF0508	SHEET	
72	LSGQ0181	HAND STRAP	
101	VPF1129	POLY BAG	
103	LSPG2122	PACKING CASE,PAPER	PV-GS29PL
103	LSPG2120	PACKING CASE,PAPER	PV-GS39PL
103	LSPG2119	PACKING CASE,PAPER	PV-GS69PL
104	LSPN0659	DVD PACKING	
105	LSFC0018	SHOULDER BELT	
106	LSYF0552	LENS CAP UNIT	
108	K2GJ2DC00015	DV CABLE W/PLUG	
110	DE-974FA	AC ADAPTOR UNIT	
112	K2KC4CB00022	AUDIO VIDEO CABLE W/PLUG	
113	N2QAEC000017	INFRARED REMOTE CONTROL UNIT	PV-GS69PL
115	K1HA05CD0014	USB CABLE W/PLUG	PV-GS39PL,PV-GS69PL
119	LSFT0648	CD-ROM	PV-GS69PL
120	LSQT1070-A	INSTRUCTION BOOK	
125	K2CA2CA00025	AC CORD W/PLUG	
201	VXY1892Z1	MAIN CHASSIS UNIT	PSEC
202	VEG1663-M	CYLINDER UNIT	PSEC
203	VXA8198	CASSETTE UP UNIT	SPC
207	VXR0401	T-REEL TABLE	SPC
208	VMB3766	CASSETTE UP SPRING	SPC
433	XQN16+BJ6FN	SCREW,STEEL	
441	VHD1133	SCREW,STEEL	

Ref. No.	Part No.	Part Name & Description	Remarks
450	XQN16+B4FN	SCREW,STEEL	
519	XQN16+BF4FN	SCREW,STEEL	
524	XQN16+BJ4FNK	SCREW,STEEL	
533	XQN16+BJ4FN	SCREW,STEEL	
534	VHD1757	SCREW,STEEL	PSEC
535	XQN14+B2FN	SCREW,STEEL	PSEC
536	XQN16+AJ4FN	SCREW,STEEL	
537	XQN16+BJ5FN	SCREW,STEEL	
538	XQN14+BJ4FN	SCREW,STEEL	
540	XQN16+BF3FN	SCREW,STEEL	
545	XQN16+BF25FN	SCREW,STEEL	
701	LSEK0628	ELECTRIC CONDENSER MICROPHONE UNIT	
702	LSMG0136	MIC DAMPER	
703	LSSC0832	FRONT EARTH PLATE	
704	B3RAB0000039	INFRARED RECEIVER	PV-GS69PL
705	LSJB8337	FRONT FLEXIBLE PRINTED CIRCUIT	
721	K1NA09E00063	SD UNIT	PV-GS39PL,PV-GS69PL
E10	LSEP8330A1	MAIN P.C.B.	RTL PV-GS29PL
E10	LSEP8330B1	MAIN P.C.B.	RTL PV-GS39PL
E10	LSEP8330C1	MAIN P.C.B.	RTL PV-GS69PL
E20	LSEP8331A1	CAMERA P.C.B.	RTL PV-GS29PL
E20	LSEP8331B1	CAMERA P.C.B.	RTL PV-GS39PL,PV-GS69PL
E30	LSEP8332B1	FRONT P.C.B.	RTL PV-GS29PL,PV-GS39PL
E30	LSEP8332C1	FRONT P.C.B.	RTL PV-GS69PL
E40	LSEP8334A1	LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR	PV-GS29PL
E40	LSEP8359A1	LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR	PV-GS39PL,PV-GS69PL
E50	LSEQ0817	CCD P.C.B. NR	PV-GS29PL
E50	LSEQ0815	CCD P.C.B. NR	PV-GS39PL,PV-GS69PL

SERVICE FIXTURES AND TOOLS

Ref. No.	Part No.	Part Name & Description	Remarks
	VFM3010EDS	COLOR BAR STANDARD TAPE	SPC
	VFK1451	DVC HEAD CLEANING TAPE	SPC
	LSVQ0028	PLIER FOR NON ZIF CONNECTOR	
	LSUQ0050	GREASE	
	LSUA0019	EXTENSION CABLE 8P	
	LSUA0016	EXTENSION CABLE 10P	
	VUVS0015	EXTENSION CABLE 28P	
	LSUA0060	EXTENSION CABLE 90P	
	LSUA0017	EXTENSION CABLE 18P	
	VUVS0012	EXTENSION CABLE 22P	
	VFK1164LBX1	LIGHT BOX	SPC
	VFK1164TCM02	INFINITY LENS (WITH FOCUS CHART)	SPC
	VFK1164TAR58	ATTACHMENT RING (58mm)	SPC
	VFK1164TAR55	ATTACHMENT RING (55mm)	SPC
	VFK1164TAR52	ATTACHMENT RING (52mm)	SPC
	VFK1164TAR49	ATTACHMENT RING (49mm)	SPC
	VFK1164TAR46	ATTACHMENT RING (46mm)	SPC
	VFK1164TAR43	ATTACHMENT RING (43mm)	SPC
	VFK1164TAR37	ATTACHMENT RING (37mm)	SPC
	VFK1164TAR3A	ATTACHMENT RING (30.5mm)	SPC
	VFK1164TAR27	ATTACHMENT RING (27mm)	SPC
	VFK1164TFCT2	COLOR CONVERSION FILTER (C14)	SPC
	VFK1164TFWC2	WHITE CHART	SPC
	VFK1164TFCB2	COLOR BAR CHART	SPC
	VFK1164TFGS2	GRAY SCALE CHART	SPC
	VFK1899	POST HEIGHT ADJUSTMENT FIXTURE	SPC

16.2. ELECTRICAL REPLACEMENT PARTS LIST

Definition of Parts supplier:

1. All parts are supplied from PSECI.

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E10	LSEP8330A1	MAIN P.C.B.	E.S.D. RTL PV-GS29PL
E10	LSEP8330B1	MAIN P.C.B.	E.S.D. RTL PV-GS39PL
E10	LSEP8330C1	MAIN P.C.B.	E.S.D. RTL PV-GS69PL
E20	LSEP8331A1	CAMERA P.C.B.	E.S.D. RTL PV-GS29PL
E20	LSEP8331B1	CAMERA P.C.B.	E.S.D. RTL PV-GS39PL,PV-GS69PL
E30	LSEP8332B1	FRONT P.C.B.	RTL PV-GS29PL,PV-GS39PL
E30	LSEP8332C1	FRONT P.C.B.	RTL PV-GS69PL
E40	LSEP8334A1	LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR	PV-GS29PL
E40	LSEP8359A1	LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR	PV-GS39PL,PV-GS69PL
E50	LSEQ0817	CCD P.C.B. NR	PV-GS29PL
E50	LSEQ0815	CCD P.C.B. NR	PV-GS39PL,PV-GS69PL

16.2.1. MAIN C.B.A

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC401	C1AB00001932	IC, LOGIC	E.S.D. PV-GS69PL
IC1001	C0DBAZZ00064	IC, LINEAR	
IC1002	C0CBABD00060	IC, LINEAR	
IC1003	C0CBCAC00214	IC, LINEAR	
IC1004	C0CBCAC00207	IC, LINEAR	
IC2001	C1AB00002122	IC, LINEAR	
IC2002	C0ABAA000046	IC, LINEAR	
IC3001	C1AB00002028	IC, LOGIC	E.S.D.
IC3101	C1AB00001894	IC, LOGIC	E.S.D.
IC3102	C0JBAS000219	IC, LOGIC	E.S.D.
IC3201	C1AB00001695	IC, LOGIC	E.S.D.
IC5001	AN3732FJMEFV	IC, LINEAR	
IC6001	C2DBMK000056	IC, 32BIT MICROCONTROLLER	E.S.D. PV-GS29PL,PV-GS39PL
IC6001	C2DBMK000057	IC, 32BIT MICROCONTROLLER	E.S.D. PV-GS69PL
IC6003	C3EBGG000013	IC, 16K EEP ROM	E.S.D.
or IC6003	C3EBGG000016	IC, 16K EEP ROM	E.S.D.
IC6004	C1ZBZ0002602	IC, CMOS GATE ARRAYS	E.S.D.
IC6005	C0EBE0000240	IC, LOGIC	E.S.D.
IC8001	AN12531A-VB	IC, LINEAR	
IC8002	C0JBAZ002426	IC, LOGIC	E.S.D. PV-GS39PL,PV-GS69PL

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q401	UNR921TJ08	TRANSISTOR COMPLX CMP SI NPN CHIP	PV-GS69PL
or Q401	B1GBCFLN0003	TRANSISTOR SI NPN CHIP	PV-GS69PL
Q1001	UNR9112J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q1001	B1GDCFLL0019	TRANSISTOR SI PNP CHIP	
or Q1001	B1GDCFLL0020	TRANSISTOR SI PNP CHIP	
Q1004	B1DHBC000005	TRANSISTOR FET CHIP	
Q1005	B1DHBC000005	TRANSISTOR FET CHIP	
Q1006	B1DHBC000005	TRANSISTOR FET CHIP	
Q1007	B1DFCG000011	TRANSISTOR FET CHIP	
Q1008	B1ZBZ0000048	IC PROTECTOR CHIP	
Q1009	B1ZBZ0000048	IC PROTECTOR CHIP	
Q1016	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q1016	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q1018	2SB1462J08	TRANSISTOR SI PNP CHIP	
or Q1018	B1ADCF000072	TRANSISTOR SI PNP CHIP	
Q1019	2SB1218A0L	TRANSISTOR SI PNP CHIP	
or Q1019	B1ADCF000063	TRANSISTOR SI PNP CHIP	
or Q1019	B1ADCF000075	TRANSISTOR SI PNP CHIP	
Q1022	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q1022	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1024	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q1024	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q1025	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q1025	B1ABCF000104	TRANSISTOR SI NPN CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
Q1026	XP0431400L	TRANSISTOR SI NPN CHIP	
Q1040	UNR9114J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q1040	B1GDCFJN0017	TRANSISTOR SI PNP CHIP	
Q1041	UNR921TJ08	TRANSISTOR COMPLX CMP SI NPN CHIP	
or Q1041	B1GBCFLN0003	TRANSISTOR SI NPN CHIP	
Q1042	UNR911TJ08	TRANSISTOR COMPLX CMP SI PNP CHIP	PV-GS29PL
or Q1042	B1GDCFLM0005	TRANSISTOR SI PNP CHIP	PV-GS29PL
Q1043	2SD2216J08	TRANSISTOR SI NPN CHIP	PV-GS29PL
or Q1043	B1ABCF000104	TRANSISTOR SI NPN CHIP	PV-GS29PL
Q1045	2SB1218A0L	TRANSISTOR SI PNP CHIP	PV-GS29PL
or Q1045	B1ADCF000063	TRANSISTOR SI PNP CHIP	PV-GS29PL
or Q1045	B1ADCF000075	TRANSISTOR SI PNP CHIP	PV-GS29PL
Q1046	UNR921TJ08	TRANSISTOR COMPLX CMP SI NPN CHIP	PV-GS29PL
or Q1046	B1GBCFLN0003	TRANSISTOR SI NPN CHIP	PV-GS29PL
Q1047	UNR9213J08	TRANSISTOR COMPLX CMP SI NPN CHIP	PV-GS29PL
or Q1047	B1GBCFNN0029	TRANSISTOR SI NPN CHIP	PV-GS29PL
or Q1047	B1GBCFNN0030	TRANSISTOR SI NPN CHIP	PV-GS29PL
Q3001	UNR9111J08	TRANSISTOR COMPLX CMP SI PNP CHIP	PV-GS29PL,PV-GS39PL
or Q3001	B1GDCFJJ0027	TRANSISTOR SI PNP CHIP	PV-GS29PL,PV-GS39PL
or Q3001	B1GDCFJJ0028	TRANSISTOR SI PNP CHIP	PV-GS29PL,PV-GS39PL
Q4501	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q4501	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q4502	UNR9213J08	TRANSISTOR COMPLX CMP SI NPN CHIP	
or Q4502	B1GBCFNN0029	TRANSISTOR SI NPN CHIP	
or Q4502	B1GBCFNN0030	TRANSISTOR SI NPN CHIP	
Q6002	UNR9213J08	TRANSISTOR COMPLX CMP SI NPN CHIP	
or Q6002	B1GBCFNN0029	TRANSISTOR SI NPN CHIP	
or Q6002	B1GBCFNN0030	TRANSISTOR SI NPN CHIP	
Q6003	2SD1820A0L	TRANSISTOR SI NPN CHIP	
Q6004	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q6004	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q6008	UNR921TJ08	TRANSISTOR COMPLX CMP SI NPN CHIP	
or Q6008	B1GBCFLN0003	TRANSISTOR SI NPN CHIP	
Q6009	UNR921EJ08	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q6010	2SB09700RL	TRANSISTOR SI PNP CHIP	
Q6011	UNR9115J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q6011	B1GDCFJA0015	TRANSISTOR SI PNP CHIP	
or Q6011	B1GDCFJA0016	TRANSISTOR SI PNP CHIP	
Q6012	UNR9115J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q6012	B1GDCFJA0015	TRANSISTOR SI PNP CHIP	
or Q6012	B1GDCFJA0016	TRANSISTOR SI PNP CHIP	
Q6013	UNR9115J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q6013	B1GDCFJA0015	TRANSISTOR SI PNP CHIP	
or Q6013	B1GDCFJA0016	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1002	MA2S111008	DIODE SI CHIP	
or D1002	B0ACCK000003	DIODE SI CHIP	
or D1002	MA2S11100L	DIODE SI CHIP	
D1003	MA2S111008	DIODE SI CHIP	
or D1003	B0ACCK000003	DIODE SI CHIP	
or D1003	MA2S11100L	DIODE SI CHIP	
D1006	MAZ80750ML	DIODE SI CHIP	
D1007	MAZ80620HL	DIODE ZENER CHIP 6.2V	PV-GS29PL
D1007	MAZ80680LL	DIODE ZENER CHIP 6.8V	PV-GS39PL,PV-GS69PL
D1009	MA2S111008	DIODE SI CHIP	
or D1009	B0ACCK000003	DIODE SI CHIP	
or D1009	MA2S11100L	DIODE SI CHIP	
D1010	MAZ81000HL	DIODE ZENER CHIP 10V	
D1011	MAZ81300ML	DIODE ZENER CHIP 13V	PV-GS29PL
D1011	MAZ81600ML	DIODE ZENER CHIP 16V	PV-GS39PL,PV-GS69PL
D1012	MA2S111008	DIODE SI CHIP	
or D1012	B0ACCK000003	DIODE SI CHIP	
or D1012	MA2S11100L	DIODE SI CHIP	
D1101	B0BC01200021	DIODE ZENER CHIP 12V	
D1102	MA2S111008	DIODE SI CHIP	
or D1102	B0ACCK000003	DIODE SI CHIP	
or D1102	MA2S11100L	DIODE SI CHIP	
D1103	MA2S111008	DIODE SI CHIP	PV-GS39PL,PV-GS69PL
or D1103	B0ACCK000003	DIODE SI CHIP	PV-GS39PL,PV-GS69PL
or D1103	MA2S11100L	DIODE SI CHIP	PV-GS39PL,PV-GS69PL
D2001	MA3S13300L	DIODE SI CHIP	
D3901	D4ED1120A005	SURGE ABSORBER	
D6005	MA2S728008	DIODE SI CHIP	
or D6005	B0JCDD000002	DIODE SI CHIP	
or D6005	MA2S72800L	DIODE SI CHIP	
D6006	MA3J14700L	DIODE SI CHIP	
D7013	D4ED1120A005	SURGE ABSORBER	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R401	ERJ2RKD270X	MGF CHIP 1/16W 27	PV-GS29PL,PV-GS39PL
R402	ERJ2RKD270X	MGF CHIP 1/16W 27	PV-GS29PL,PV-GS39PL
R404	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS69PL
R405	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS69PL
R407	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS69PL
R408	D0GA562JA015	MGF CHIP 1/16W 5.6K	PV-GS69PL
R409	D0GA562JA015	MGF CHIP 1/16W 5.6K	PV-GS69PL
R410	D0GA103JA015	MGF CHIP 1/16W 10K	
R411	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS69PL
R413	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS69PL
R414	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS69PL
R415	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS69PL
R1002	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1004	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1005	D0GA103JA015	MGF CHIP 1/16W 10K	
R1006	D0GA223JA015	MGF CHIP 1/16W 22K	
R1007	ERA3YED822V	MGF CHIP 1/16W 8.2K	
R1008	D0GA153JA015	MGF CHIP 1/16W 15K	
R1009	D0GA223JA015	MGF CHIP 1/16W 22K	
R1011	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1012	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1013	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1014	ERJ2GEJ151X	MGF CHIP 1/16W 150	
R1015	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R1016	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1017	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1024	D1BA9101A034	MGF CHIP 1/16W 9.1K	
R1027	D1BA3001A034	MGF CHIP 1/16W 3K	
R1028	ERJ2RKD330X	MGF CHIP 1/16W 33	
R1030	D1BA3901A034	MGF CHIP 1/16W 3.9K	
R1033	D1BA2701A034	MGF CHIP 1/16W 2.7K	
R1034	D1BA2700A034	MGF CHIP 1/16W 270	
R1035	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1036	D1BA1201A034	MGF CHIP 1/16W 1.2K	
R1039	D1BA4701A034	MGF CHIP 1/16W 4.7K	
R1040	D1BA2200A034	MGF CHIP 1/16W 220	
R1042	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R1043	D1BA2702A034	MGF CHIP 1/16W 27K	PV-GS29PL
R1043	D1BA3302A034	MGF CHIP 1/16W 33K	PV-GS39PL,PV-GS69PL
R1046	D1BA2701A034	MGF CHIP 1/16W 2.7K	PV-GS39PL,PV-GS69PL
R1046	D1BA3001A034	MGF CHIP 1/16W 3K	PV-GS29PL
R1047	D1BA2400A034	MGF CHIP 1/16W 240	PV-GS39PL,PV-GS69PL
R1047	ERJ2RKD820X	MGF CHIP 1/16W 82	
R1051	D0GA472JA015	MGF CHIP 1/16W 4.7K	PV-GS29PL
R1052	D0GA223JA015	MGF CHIP 1/16W 22K	PV-GS29PL
R1052	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS39PL,PV-GS69PL
R1053	ERJ2RHD472X	MGF CHIP 1/16W 4.7K	
R1054	ERJ2RHD472X	MGF CHIP 1/16W 4.7K	
R1055	ERJ2GEJ684X	MGF CHIP 1/16W 680K	PV-GS39PL,PV-GS69PL
R1055	ERJ2GEJ824X	MGF CHIP 1/16W 820K	PV-GS29PL
R1056	ERJ2GEJ105X	MGF CHIP 1/16W 1M	PV-GS29PL

Ref. No.	Part No.	Part Name & Description	Remarks
R1056	ERJ2GEJ155X	MGF CHIP 1/16W 1.5M	PV-GS39PL,PV-GS69PL
R1057	ERJ2RHD472X	MGF CHIP 1/16W 4.7K	
R1058	D0GA223JA015	MGF CHIP 1/16W 22K	
R1059	D0GA473JA015	MGF CHIP 1/16W 47K	
R1060	ERJ2RHD221X	MGF CHIP 1/16W 220	PV-GS29PL
R1060	ERJ2RHD222X	MGF CHIP 1/16W 2.2K	PV-GS39PL,PV-GS69PL
R1061	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R1082	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R1086	D0GA103JA015	MGF CHIP 1/16W 10K	
R1087	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1091	D0GA223JA015	MGF CHIP 1/16W 22K	PV-GS29PL
R1092	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS29PL
R1094	D0GA103JA015	MGF CHIP 1/16W 10K	PV-GS29PL
R1095	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R1096	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS29PL
R1098	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R1104	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R1107	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R2001	ERJ8GEYJR27V	MGF CHIP 1/8W 0.27	
R2002	D0GA103JA015	MGF CHIP 1/16W 10K	
R2003	ERJ8GEYJR27V	MGF CHIP 1/8W 0.27	
R2004	D0GA273JA015	MGF CHIP 1/16W 27K	
R2005	D0GA242JA015	MGF CHIP 1/16W 2.4K	
R2006	D0GA153JA015	MGF CHIP 1/16W 15K	
R2007	ERJ2RHD273X	MGF CHIP 1/16W 27K	
R2008	D0GA103JA015	MGF CHIP 1/16W 10K	
R2009	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R2010	D0GA102JA015	MGF CHIP 1/16W 1K	
R2011	D0GA823JA015	MGF CHIP 1/16W 82K	
R2012	D0GA102JA015	MGF CHIP 1/16W 1K	
R2013	D0GA473JA015	MGF CHIP 1/16W 47K	
R2014	D0GA102JA015	MGF CHIP 1/16W 1K	
R2015	D0GA102JA015	MGF CHIP 1/16W 1K	
R2016	D0GA102JA015	MGF CHIP 1/16W 1K	
R2017	D0GA102JA015	MGF CHIP 1/16W 1K	
R2018	ERJ8GEYJR68V	MGF CHIP 1/8W 0.68	
R2019	D0GA223JA015	MGF CHIP 1/16W 22K	
R2020	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
R2021	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R2024	D0GA103JA015	MGF CHIP 1/16W 10K	
R2025	D0GA183JA015	MGF CHIP 1/16W 18K	
R2026	D0GA393JA015	MGF CHIP 1/16W 39K	
R2027	D0GA563JA015	MGF CHIP 1/16W 56K	
R2028	D0GA103JA015	MGF CHIP 1/16W 10K	
R2029	D0GA103JA015	MGF CHIP 1/16W 10K	
R2030	D0GA103JA015	MGF CHIP 1/16W 10K	
R2031	D0GA103JA015	MGF CHIP 1/16W 10K	
R2032	D0GA102JA015	MGF CHIP 1/16W 1K	
R2033	D0GA102JA015	MGF CHIP 1/16W 1K	
R2034	D0GA102JA015	MGF CHIP 1/16W 1K	
R2035	D0GA102JA015	MGF CHIP 1/16W 1K	
R2038	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R2039	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R3006	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R3007	ERJ2GEJ101X	MGF CHIP 1/16W 100	

Ref. No.	Part No.	Part Name & Description	Remarks
R3008	ERJ2RHD123X	MGF CHIP 1/16W 12K	
R3009	D0GA103JA015	MGF CHIP 1/16W 10K	
R3010	D0GA103JA015	MGF CHIP 1/16W 10K	
R3011	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3012	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3013	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3014	ERJ2RKD560X	MGF CHIP 1/16W 56	
R3015	D0GA473JA015	MGF CHIP 1/16W 47K	
R3016	D0GA473JA015	MGF CHIP 1/16W 47K	
R3017	D0GA473JA015	MGF CHIP 1/16W 47K	
R3018	D0GA473JA015	MGF CHIP 1/16W 47K	
R3019	D0GA473JA015	MGF CHIP 1/16W 47K	
R3029	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3030	D0GA103JA015	MGF CHIP 1/16W 10K	
R3031	D0GA153JA015	MGF CHIP 1/16W 15K	
R3032	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R3033	ERJ2RHD123X	MGF CHIP 1/16W 12K	
R3034	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R3035	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R3036	ERJ2GEJ181X	MGF CHIP 1/16W 180	PV-GS29PL,PV-GS39PL
R3037	ERJ2GEJ105X	MGF CHIP 1/16W 1M	PV-GS29PL,PV-GS39PL
R3039	D0GA223JA015	MGF CHIP 1/16W 22K	
R3040	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3043	D0GA152JA015	MGF CHIP 1/16W 1.5K	PV-GS29PL,PV-GS39PL
R3044	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS69PL
R3045	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS69PL
R3079	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3080	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3081	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3082	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3083	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3084	D0GA473JA015	MGF CHIP 1/16W 47K	
R3085	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3087	D0GA473JA015	MGF CHIP 1/16W 47K	
R3088	D0GA473JA015	MGF CHIP 1/16W 47K	
R3103	ERJ2RKD680X	MGF CHIP 1/16W 68	
R3114	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3115	ERJ2RHD472X	MGF CHIP 1/16W 4.7K	
R3201	ERJ2GEJ100X	MGF CHIP 1/16W 10	
R3202	D0GA182JA015	MGF CHIP 1/16W 1.8K	
R3203	ERJ2GEJ271X	MGF CHIP 1/16W 270	
R3204	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R3205	D0GA272JA015	MGF CHIP 1/16W 2.7K	
R3206	ERJ2GEJ221X	MGF CHIP 1/16W 220	
R3207	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R3208	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R3209	D0GA103JA015	MGF CHIP 1/16W 10K	
R3210	D0GA103JA015	MGF CHIP 1/16W 10K	
R3211	D0GA103JA015	MGF CHIP 1/16W 10K	
R3212	D0GA103JA015	MGF CHIP 1/16W 10K	
R3218	D0GA473JA015	MGF CHIP 1/16W 47K	
R3225	D0GA102JA015	MGF CHIP 1/16W 1K	
R3226	D0GA102JA015	MGF CHIP 1/16W 1K	
R3227	ERJ2GE0R00X	MGF CHIP 1/16W 0	

Ref. No.	Part No.	Part Name & Description	Remarks
R3229	D0GA473JA015	MGF CHIP 1/16W 47K	
R3230	D0GA473JA015	MGF CHIP 1/16W 47K	
R3231	D0GA473JA015	MGF CHIP 1/16W 47K	
R3232	D0GA102JA015	MGF CHIP 1/16W 1K	
R3233	D0GA102JA015	MGF CHIP 1/16W 1K	
R3234	D0GA102JA015	MGF CHIP 1/16W 1K	
R3901	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R3904	D0GA122JA015	MGF CHIP 1/16W 1.2K	
R3905	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R3906	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R4501	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R4504	ERJ2GEJ561X	MGF CHIP 1/16W 560	
R4505	ERJ2GEJ561X	MGF CHIP 1/16W 560	
R4535	D0GA272JA015	MGF CHIP 1/16W 2.7K	
R4536	ERJ2GEJ124X	MGF CHIP 1/16W 120K	
R4538	D0GA223JA015	MGF CHIP 1/16W 22K	
R4540	D0GA223JA015	MGF CHIP 1/16W 22K	
R4542	D0GA183JA015	MGF CHIP 1/16W 18K	
R5005	D0GA103JA015	MGF CHIP 1/16W 10K	
R5006	D0GA103JA015	MGF CHIP 1/16W 10K	
R5007	D0GA103JA015	MGF CHIP 1/16W 10K	
R5008	D0GA103JA015	MGF CHIP 1/16W 10K	
R5009	D0GA182JA015	MGF CHIP 1/16W 1.8K	
R5010	D0GA682JA015	MGF CHIP 1/16W 6.8K	
R5011	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6001	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R6002	ERJ6GEYJ330V	MGF CHIP 1/10W 330	
R6003	ERJ6GEYJ330V	MGF CHIP 1/10W 330	
R6004	D0GA102JA015	MGF CHIP 1/16W 1K	
R6005	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6006	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6007	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6008	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6009	ERJ2GEJ104X	MGF CHIP 1/16W 100K	PV-GS29PL
R6010	ERJ2GEJ394X	MGF CHIP 1/16W 390K	
R6011	D0GA472JA015	MGF CHIP 1/16W 4.7K	
R6012	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6013	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6014	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6015	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R6017	D0GA102JA015	MGF CHIP 1/16W 1K	
R6020	D0GA102JA015	MGF CHIP 1/16W 1K	
R6021	D0GA183JA015	MGF CHIP 1/16W 18K	
R6022	D0GA183JA015	MGF CHIP 1/16W 18K	
R6023	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6024	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6025	D0GA273JA015	MGF CHIP 1/16W 27K	
R6026	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6027	ERJ2RHD103X	MGF CHIP 1/16W 10K	
R6028	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6029	D0GA273JA015	MGF CHIP 1/16W 27K	
R6030	D0GA103JA015	MGF CHIP 1/16W 10K	
R6031	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6032	D0GA392JA015	MGF CHIP 1/16W 3.9K	
R6033	D0GA223JA015	MGF CHIP 1/16W 22K	
R6034	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6036	D0GA473JA015	MGF CHIP 1/16W 47K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6038	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6039	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6040	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6041	D0GA102JA015	MGF CHIP 1/16W 1K	
R6042	D0GA102JA015	MGF CHIP 1/16W 1K	
R6043	D0GA102JA015	MGF CHIP 1/16W 1K	
R6044	D0GA102JA015	MGF CHIP 1/16W 1K	
R6045	ERJ2RHD683X	MGF CHIP 1/16W 68K	
R6046	D0GA393JA015	MGF CHIP 1/16W 39K	
R6047	ERJ2RHD223X	MGF CHIP 1/16W 22K	
R6049	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6050	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6052	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R6053	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6054	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6055	ERJ2GEJ470X	MGF CHIP 1/16W 47	
R6056	ERJ2GEJ471X	MGF CHIP 1/16W 470	
R6057	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6058	D0GA102JA015	MGF CHIP 1/16W 1K	
R6059	D0GA102JA015	MGF CHIP 1/16W 1K	
R6060	D0GA102JA015	MGF CHIP 1/16W 1K	
R6061	D0GA822JA015	MGF CHIP 1/16W 8.2K	
R6062	D0GA473JA015	MGF CHIP 1/16W 47K	PV-GS69PL
R6062	ERJ2GEJ124X	MGF CHIP 1/16W 120K	PV-GS39PL
R6063	D0GA473JA015	MGF CHIP 1/16W 47K	
R6064	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6065	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6066	D0GA822JA015	MGF CHIP 1/16W 8.2K	
R6067	D0GA123JA015	MGF CHIP 1/16W 12K	
R6068	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6069	D0GA123JA015	MGF CHIP 1/16W 12K	
R6070	D0GA222JA015	MGF CHIP 1/16W 2.2K	
R6071	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6072	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6073	D0GA103JA015	MGF CHIP 1/16W 10K	
R6074	D0GA152JA015	MGF CHIP 1/16W 1.5K	
R6075	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6076	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6077	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6078	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6079	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6080	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6081	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6082	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6084	D0GA102JA015	MGF CHIP 1/16W 1K	
R6085	D0GA102JA015	MGF CHIP 1/16W 1K	
R6086	D0GA102JA015	MGF CHIP 1/16W 1K	
R6087	D0GA102JA015	MGF CHIP 1/16W 1K	
R6088	D0GA102JA015	MGF CHIP 1/16W 1K	
R6089	D0GA102JA015	MGF CHIP 1/16W 1K	
R6090	D0GA102JA015	MGF CHIP 1/16W 1K	
R6091	D0GA102JA015	MGF CHIP 1/16W 1K	
R6092	D0GA102JA015	MGF CHIP 1/16W 1K	
R6093	D0GA473JA015	MGF CHIP 1/16W 47K	
R6094	D0GA473JA015	MGF CHIP 1/16W 47K	
R6095	D0GA473JA015	MGF CHIP 1/16W 47K	
R6096	D0GA473JA015	MGF CHIP 1/16W 47K	

Ref. No.	Part No.	Part Name & Description	Remarks
R6097	D0GA473JA015	MGF CHIP 1/16W 47K	
R6098	D0GA473JA015	MGF CHIP 1/16W 47K	
R6099	D0GA473JA015	MGF CHIP 1/16W 47K	
R6100	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6101	D0GA473JA015	MGF CHIP 1/16W 47K	
R6102	D0GA102JA015	MGF CHIP 1/16W 1K	
R6103	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6104	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6105	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6106	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6107	D0GA473JA015	MGF CHIP 1/16W 47K	
R6108	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6109	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6110	ERJ2GEJ331X	MGF CHIP 1/16W 330	
R6111	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6112	D0GA332JA015	MGF CHIP 1/16W 3.3K	
R6113	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6114	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R6115	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R6116	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R6117	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6118	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6119	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6120	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R6121	ERJ2GEJ104X	MGF CHIP 1/16W 100K	
R6123	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R6124	D0GA102JA015	MGF CHIP 1/16W 1K	
R6125	ERJ2GEJ105X	MGF CHIP 1/16W 1M	
R7004	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R7005	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R7008	J0JBC0000027	FERRITE BEAD CHIP	
R7009	J0JBC0000027	FERRITE BEAD CHIP	
R7010	J0JBC0000027	FERRITE BEAD CHIP	
R7011	D0GA392JA015	MGF CHIP 1/16W 3.9K	
R7013	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R8001	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8002	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8003	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8004	D0GA153JA015	MGF CHIP 1/16W 15K	
R8005	D0GA682JA015	MGF CHIP 1/16W 6.8K	
R8006	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R8007	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R8011	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R8012	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8013	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R8014	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R8015	ERJ2GE0R00X	MGF CHIP 1/16W 0	
R8016	ERJ2GEJ101X	MGF CHIP 1/16W 100	
R8017	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8018	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS29PL
R8019	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8020	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8021	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL

Ref. No.	Part No.	Part Name & Description	Remarks
R8022	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8023	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8024	D0GA223JA015	MGF CHIP 1/16W 22K	PV-GS39PL,PV-GS69PL
R8025	D0GA103JA015	MGF CHIP 1/16W 10K	PV-GS39PL,PV-GS69PL
R8026	D0GA123JA015	MGF CHIP 1/16W 12K	PV-GS39PL,PV-GS69PL
R8028	D0GA103JA015	MGF CHIP 1/16W 10K	PV-GS39PL,PV-GS69PL
R8029	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8030	ERJ2GE0R00X	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R8031	ERJ2GE0R00X	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C407	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C409	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C410	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C411	F1J1A106A023	C CHIP 10V 10UF	PV-GS69PL
C412	F1J1A106A023	C CHIP 10V 10UF	PV-GS69PL
C413	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C415	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C416	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C417	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C418	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C419	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS69PL
C1001	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C1003	ECJ0EC1H101J	C CHIP 50V 100PF	
C1004	F1H1E223A029	C CHIP 25V 0.022UF	
C1005	F1H1C104A041	C CHIP 16V 0.1UF	
C1006	F1H1C104A041	C CHIP 16V 0.1UF	
C1007	F1J1C1050028	C CHIP 16V 1UF	
C1008	F1J1C1050028	C CHIP 16V 1UF	
C1009	F1G1A473A014	C CHIP 10V 0.047UF	
C1011	F1G1E472A062	C CHIP 25V 4700PF	
C1012	F1G1C103A004	C CHIP 16V 0.01UF	
C1014	F1G1C223A004	C CHIP 16V 0.022UF	
C1017	F1G1E472A062	C CHIP 25V 4700PF	
C1018	ECJ0EB1C153K	C CHIP 16V 0.015UF	
C1020	ECJ3YB1C475K	C CHIP 16V 4.7UF	
C1031	F1J1C105A083	C CHIP 16V 1UF	
C1032	F1L1C106A007	C CHIP 16V 10UF	
C1034	F1J0J4750005	C CHIP 6.3V 4.7UF	
C1036	F1J0J4750005	C CHIP 6.3V 4.7UF	
C1037	F1G1A1040006	C CHIP 10V 0.1UF	
C1038	F1J0J4750005	C CHIP 6.3V 4.7UF	
C1039	F1J1C1050028	C CHIP 16V 1UF	
C1040	F1J1C1050028	C CHIP 16V 1UF	
C1041	F1J1C1050028	C CHIP 16V 1UF	
C1042	F1J1C1050028	C CHIP 16V 1UF	
C1043	F1G1H681A571	C CHIP 50V 680PF	
C1046	F1G1H152A496	C CHIP 50V 1500PF	

Ref. No.	Part No.	Part Name & Description	Remarks
C1048	F1G1H222A571	C CHIP 50V 2200PF	
C1050	F1G1H152A496	C CHIP 50V 1500PF	
C1051	F1H1A105A019	C CHIP 10V 1UF	
C1053	F1H1A105A019	C CHIP 10V 1UF	
C1056	F1H1A105A019	C CHIP 10V 1UF	
C1057	F1H1A105A019	C CHIP 10V 1UF	
C1058	F1H1A105A019	C CHIP 10V 1UF	
C1060	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C1061	F1H1A105A036	C CHIP 10V 1UF	
C1062	F1H1A105A019	C CHIP 10V 1UF	
C1063	F1H1A105A036	C CHIP 10V 1UF	
C1064	F1H1A105A019	C CHIP 10V 1UF	
C1067	F1H1A105A019	C CHIP 10V 1UF	
C1068	F1H1A105A036	C CHIP 10V 1UF	
C1069	F3E0J106A009	TANTALUM CHIP 6.3V 10UF	
C1070	F1H1A105A036	C CHIP 10V 1UF	
C1071	F1J1C2250003	C CHIP 16V 2.2UF	
C1072	F1J1C2250003	C CHIP 16V 2.2UF	PV-GS29PL
C1073	F1J1C1050028	C CHIP 16V 1UF	
C1074	F1H1A105A036	C CHIP 10V 1UF	
C1075	F1H1A105A019	C CHIP 10V 1UF	
C1080	F3E0J106A009	TANTALUM CHIP 6.3V 10UF	
C1088	F3E0J106A009	TANTALUM CHIP 6.3V 10UF	
C1090	F1H1C104A041	C CHIP 16V 0.1UF	
C1091	F1H1A105A036	C CHIP 10V 1UF	
C1093	ECJ1VB1C474K	C CHIP 16V 0.47UF	PV-GS29PL
C1101	ECJ0EF1H103Z	C CHIP 50V 0.01UF	
C1102	ECJ0EF1H103Z	C CHIP 50V 0.01UF	
C1105	F1J1C1050028	C CHIP 16V 1UF	PV-GS39PL,PV-GS69PL
C1106	F1J1C2250003	C CHIP 16V 2.2UF	PV-GS39PL,PV-GS69PL
C2001	F1J1A106A023	C CHIP 10V 10UF	
C2002	F1J1A475A023	C CHIP 10V 4.7UF	
C2003	F1H1A105A036	C CHIP 10V 1UF	
C2004	F1G1C103A004	C CHIP 16V 0.01UF	
C2005	F1G1E472A062	C CHIP 25V 4700PF	
C2006	F1G1E472A062	C CHIP 25V 4700PF	
C2007	F1H1A105A036	C CHIP 10V 1UF	
C2008	F1G1A1040006	C CHIP 10V 0.1UF	
C2009	F1G1A1040006	C CHIP 10V 0.1UF	
C2010	F1G1A1040006	C CHIP 10V 0.1UF	
C2011	F1G1A1040006	C CHIP 10V 0.1UF	
C2012	F1H1A105A036	C CHIP 10V 1UF	
C2013	F1G1A1040006	C CHIP 10V 0.1UF	
C2014	F1G1A1040006	C CHIP 10V 0.1UF	
C2015	F1G1A1040006	C CHIP 10V 0.1UF	
C2016	F1G1A1040006	C CHIP 10V 0.1UF	
C2017	F1H1A105A036	C CHIP 10V 1UF	
C2018	F1H1C104A041	C CHIP 16V 0.1UF	
C2021	ECJ0EC1H101J	C CHIP 50V 100PF	
C2022	F1H1A105A036	C CHIP 10V 1UF	
C2023	F1H1A105A036	C CHIP 10V 1UF	
C2024	F1G1H470A542	C CHIP 50V 47PF	
C2025	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C2026	F1G1A1040006	C CHIP 10V 0.1UF	
C3001	F1J1A106A023	C CHIP 10V 10UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C3003	F1G1A1040006	C CHIP 10V 0.1UF	
C3005	F1G1C103A004	C CHIP 16V 0.01UF	
C3006	F1J1A106A023	C CHIP 10V 10UF	
C3007	F1G1C103A004	C CHIP 16V 0.01UF	
C3008	F3F0G226A046	TANTALUM CHIP 4V 22UF	
C3009	F1G1C103A004	C CHIP 16V 0.01UF	
C3010	F1H1A105A036	C CHIP 10V 1UF	
C3011	F1G1C103A004	C CHIP 16V 0.01UF	
C3012	F1H1A105A036	C CHIP 10V 1UF	
C3013	F1H1A105A036	C CHIP 10V 1UF	
C3014	F1G1C103A004	C CHIP 16V 0.01UF	
C3015	F1J1A106A023	C CHIP 10V 10UF	
C3016	F1G1A1040006	C CHIP 10V 0.1UF	
C3017	F1G1A1040006	C CHIP 10V 0.1UF	
C3020	F1G1H220A542	C CHIP 50V 22PF	
C3021	F1G1H330A542	C CHIP 50V 33PF	
C3022	F1G1C103A004	C CHIP 16V 0.01UF	
C3023	F1G1A1040006	C CHIP 10V 0.1UF	
C3024	F1G1H221A495	C CHIP 50V 220PF	
C3025	F1H1A105A036	C CHIP 10V 1UF	
C3026	F1G1A1040006	C CHIP 10V 0.1UF	
C3027	F1G1A1040006	C CHIP 10V 0.1UF	
C3028	F1G1A1040006	C CHIP 10V 0.1UF	
C3029	F1G1A1040006	C CHIP 10V 0.1UF	
C3030	F1G1C103A004	C CHIP 16V 0.01UF	
C3031	F1G1A1040006	C CHIP 10V 0.1UF	
C3032	F1G1A1040006	C CHIP 10V 0.1UF	
C3033	F1G1C103A004	C CHIP 16V 0.01UF	
C3034	F1G1A1040006	C CHIP 10V 0.1UF	
C3035	F1G1C103A004	C CHIP 16V 0.01UF	
C3036	F1G1C103A004	C CHIP 16V 0.01UF	
C3037	F1H1A105A036	C CHIP 10V 1UF	
C3038	F1G1C103A004	C CHIP 16V 0.01UF	
C3039	F1G1A1040006	C CHIP 10V 0.1UF	
C3040	F1G1H150A542	C CHIP 50V 15PF	PV-GS29PL,PV-GS39PL
C3041	F1G1H150A542	C CHIP 50V 15PF	PV-GS29PL,PV-GS39PL
C3043	F1G1C103A004	C CHIP 16V 0.01UF	
C3044	F1G1C103A004	C CHIP 16V 0.01UF	
C3046	F1G1C103A004	C CHIP 16V 0.01UF	
C3047	F1J0J4750005	C CHIP 6.3V 4.7UF	
C3048	F1H1A105A036	C CHIP 10V 1UF	
C3101	F1G1C103A004	C CHIP 16V 0.01UF	
C3102	F1H1A105A036	C CHIP 10V 1UF	
C3103	F1J1A106A023	C CHIP 10V 10UF	
C3104	F1G1A1040006	C CHIP 10V 0.1UF	
C3105	F1H1C104A041	C CHIP 16V 0.1UF	
C3106	F1J1A106A023	C CHIP 10V 10UF	
C3107	F1G1A1040006	C CHIP 10V 0.1UF	
C3111	F3G0J107A017	TANTALUM CHIP 6.3V 100UF	
C3112	F1H1A105A036	C CHIP 10V 1UF	
C3113	F1G1A1040006	C CHIP 10V 0.1UF	
C3201	F1G1A1040006	C CHIP 10V 0.1UF	
C3202	F1G1A1040006	C CHIP 10V 0.1UF	
C3203	F1J1A106A023	C CHIP 10V 10UF	
C3204	F1G1A1040006	C CHIP 10V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C3206	F1G1A1040006	C CHIP 10V 0.1UF	
C3207	F1G1A1040006	C CHIP 10V 0.1UF	
C3209	F1J0J4750005	C CHIP 6.3V 4.7UF	
C3210	F1G1A1040006	C CHIP 10V 0.1UF	
C3211	F1G1A1040006	C CHIP 10V 0.1UF	
C3212	F1G1A1040006	C CHIP 10V 0.1UF	
C3214	F1G1A1040006	C CHIP 10V 0.1UF	
C3215	F1G1A1040006	C CHIP 10V 0.1UF	
C3216	F1G1A1040006	C CHIP 10V 0.1UF	
C3217	F1G1C103A004	C CHIP 16V 0.01UF	
C3218	F1G1A1040006	C CHIP 10V 0.1UF	
C3219	F1G1A1040006	C CHIP 10V 0.1UF	
C3224	F1G1A1040006	C CHIP 10V 0.1UF	
C3226	F1G1A1040006	C CHIP 10V 0.1UF	
C3227	F1G1A1040006	C CHIP 10V 0.1UF	
C4502	F1G1A1040006	C CHIP 10V 0.1UF	
C4504	F1G1A1040006	C CHIP 10V 0.1UF	
C4505	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C4509	F1J1A106A023	C CHIP 10V 10UF	
C4510	F1G1C103A004	C CHIP 16V 0.01UF	
C4511	F1H1A105A036	C CHIP 10V 1UF	
C4512	F1H1A105A036	C CHIP 10V 1UF	
C4513	F1H1A224A012	C CHIP 10V 0.22UF	
C4517	F1G1C103A004	C CHIP 16V 0.01UF	
C4518	F1J1A106A023	C CHIP 10V 10UF	
C4519	F1G1A1040006	C CHIP 10V 0.1UF	
C4520	F1J1A2250007	C CHIP 10V 2.2UF	
C4531	F1G1C104A042	C CHIP 16V 0.1UF	
C4532	F1G0J105A001	C CHIP 6.3V 1UF	
C5001	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C5002	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C5004	F1F1H681A571	C CHIP 50V 680PF	
C5005	F1G1C103A004	C CHIP 16V 0.01UF	
C5007	F1G1C103A004	C CHIP 16V 0.01UF	
C5009	F1G1A1040006	C CHIP 10V 0.1UF	
C5011	F1G1C103A004	C CHIP 16V 0.01UF	
C5012	F1G1A1040006	C CHIP 10V 0.1UF	
C5013	F1G1H120A542	C CHIP 50V 12PF	
C5014	F1G1H120A542	C CHIP 50V 12PF	
C5015	F1G1H120A542	C CHIP 50V 12PF	
C5016	F1G1H120A542	C CHIP 50V 12PF	
C6001	F1G1C103A004	C CHIP 16V 0.01UF	
C6002	F1H1A105A036	C CHIP 10V 1UF	
C6003	F1H0J4750005	C CHIP 6.3V 4.7UF	
C6004	F1G1C103A004	C CHIP 16V 0.01UF	
C6005	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C6006	F1G1C103A004	C CHIP 16V 0.01UF	
C6007	F1G1C103A004	C CHIP 16V 0.01UF	
C6008	F1G1C103A004	C CHIP 16V 0.01UF	
C6009	F1G1C103A004	C CHIP 16V 0.01UF	
C6010	ECJ0EB1E101K	C CHIP 25V 100PF	
C6013	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C6014	F1G1A1040006	C CHIP 10V 0.1UF	
C6015	F1H1A105A036	C CHIP 10V 1UF	
C6016	F1G1C103A004	C CHIP 16V 0.01UF	
C6018	F1G1C103A004	C CHIP 16V 0.01UF	
C6019	F1G1C103A004	C CHIP 16V 0.01UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C6020	F1G1C103A004	C CHIP 16V 0.01UF	
C6021	F1G1C103A004	C CHIP 16V 0.01UF	
C6022	F1G1C103A004	C CHIP 16V 0.01UF	
C6023	F1G1C103A004	C CHIP 16V 0.01UF	
C6024	F1G1C103A004	C CHIP 16V 0.01UF	
C6025	F1H1C104A041	C CHIP 16V 0.1UF	
C6027	F1H1C104A041	C CHIP 16V 0.1UF	
C6028	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	
C6029	F1G1C103A004	C CHIP 16V 0.01UF	
C6030	F1G1C103A004	C CHIP 16V 0.01UF	
C6031	F1G1C103A004	C CHIP 16V 0.01UF	
C6033	F1G1C103A004	C CHIP 16V 0.01UF	
C6034	F1G1C103A004	C CHIP 16V 0.01UF	
C6035	F1G1H100A544	C CHIP 50V 10PF	
C6036	F1G1H100A544	C CHIP 50V 10PF	
C7001	F1G1E472A062	C CHIP 25V 4700PF	
C7002	F1G1E472A062	C CHIP 25V 4700PF	
C7005	F1H1A105A036	C CHIP 10V 1UF	
C8001	F1G1A1040006	C CHIP 10V 0.1UF	
C8002	F1G1A1040006	C CHIP 10V 0.1UF	
C8003	F1G1A1040006	C CHIP 10V 0.1UF	
C8004	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C8005	F1H1C104A041	C CHIP 16V 0.1UF	
C8006	F1H1C104A041	C CHIP 16V 0.1UF	
C8007	F1H1C104A041	C CHIP 16V 0.1UF	
C8008	F1G1C103A004	C CHIP 16V 0.01UF	
C8009	F1H1C104A041	C CHIP 16V 0.1UF	
C8010	F1H1A105A036	C CHIP 10V 1UF	
C8011	F1J1C1050028	C CHIP 16V 1UF	
C8012	F1J1C1050028	C CHIP 16V 1UF	
C8013	F1J1A2250007	C CHIP 10V 2.2UF	
C8014	F1J1C1050028	C CHIP 16V 1UF	
C8015	F1H1C104A041	C CHIP 16V 0.1UF	
C8016	F1H1C104A041	C CHIP 16V 0.1UF	
C8017	F1H1C104A041	C CHIP 16V 0.1UF	
C8018	ECJ0EC1H121J	C CHIP 50V 120PF	PV-GS29PL
C8019	ECJ0EC1H121J	C CHIP 50V 120PF	PV-GS29PL
C8020	ECJ0EC1H121J	C CHIP 50V 120PF	PV-GS29PL
C8022	F1G1A1040006	C CHIP 10V 0.1UF	PV-GS39PL,PV-GS69PL
C8023	F1H1A105A036	C CHIP 10V 1UF	PV-GS39PL,PV-GS69PL

FILTERS

Ref. No.	Part No.	Part Name & Description	Remarks
FL401	F1H0J1050022	C CHIP 6.3V 1UF	PV-GS69PL
FL402	F1H0J1050022	C CHIP 6.3V 1UF	PV-GS69PL
FL403	F1H0J1050022	C CHIP 6.3V 1UF	PV-GS69PL
FL7002	G1BYYC00022	COIL CHIP	
FL7003	G1BYYC00022	COIL CHIP	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1001	J0JHC0000018	COIL CHIP 42UH	
L1002	G1C220ZA0050	COIL CHIP 22UH	
L1003	G1C220ZA0050	COIL CHIP 22UH	
L1004	G1C220ZA0050	COIL CHIP 22UH	
L1005	G1C330ZA0050	COIL CHIP 33UH	
L1006	G1C680Z00005	COIL CHIP 68UH	
L1007	G1C4R7MA0031	COIL CHIP 4.7UH	
L1009	G1C4R7MA0031	COIL CHIP 4.7UH	
L1010	G1C100K00020	COIL CHIP 10UH	
L1011	G1C100K00020	COIL CHIP 10UH	
L1012	G1C4R7MA0031	COIL CHIP 4.7UH	
L1013	G1C4R7MA0031	COIL CHIP 4.7UH	
L1014	G1C100K00020	COIL CHIP 10UH	
L1015	G1C100K00020	COIL CHIP 10UH	
L1016	G1C4R7MA0031	COIL CHIP 4.7UH	
L1017	G1C4R7MA0031	COIL CHIP 4.7UH	
L1019	G1C470KA0031	COIL CHIP 47UH	PV-GS29PL
L1020	G1C470KA0031	COIL CHIP 47UH	
L1021	G1C470KA0031	COIL CHIP 47UH	
L1022	G1C4R7MA0031	COIL CHIP 4.7UH	
L1023	J0JHC0000018	COIL CHIP 42UH	
L1103	G1C470KA0031	COIL CHIP 47UH	PV-GS39PL,PV-GS69PL
L3001	J0JBC0000027	FERRITE BEAD CHIP	
L3002	G1C100KA0055	COIL CHIP 10UH	
L3003	G1C100KA0055	COIL CHIP 10UH	
L3004	G1C100KA0055	COIL CHIP 10UH	
L3005	J0JBC0000027	FERRITE BEAD CHIP	
L3006	J0JBC0000027	FERRITE BEAD CHIP	
L3008	J0JBC0000027	FERRITE BEAD CHIP	
L3011	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3013	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3015	G1C100KA0055	COIL CHIP 10UH	
L3016	J0JBC0000027	FERRITE BEAD CHIP	
L3101	G1C100M00010	COIL CHIP 10UH	
L3102	G1C100M00010	COIL CHIP 10UH	
L3201	J0JBC0000014	BEAD INDUCTOR	
L3202	G1C100M00010	COIL CHIP 10UH	
L3203	G1C100M00010	COIL CHIP 10UH	
L4501	J0JBC0000027	FERRITE BEAD CHIP	
L4502	G1C470MA0031	COIL CHIP 47UH	
L4503	G1C100M00010	COIL CHIP 10UH	
L4504	G1C100M00010	COIL CHIP 10UH	
L5001	G1C101KA0031	COIL CHIP 100UH	
L5002	G1C100M00010	COIL CHIP 10UH	
L6002	G1C100KA0031	COIL CHIP 10UH	
L6003	ERJ6GEY0R00V	MGF CHIP 1/10W 0	
L8001	G1C100M00010	COIL CHIP 10UH	
L8002	G1C220KA0031	COIL CHIP 22UH	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X3001	H0J245500064	CRYSTAL OSCILLATOR	
X3002	H0J480000002	CRYSTAL OSCILLATOR	PV-GS29PL,PV-GS39PL
X6001	H0J135500031	CRYSTAL OSCILLATOR	
X6002	H0J327200115	CRYSTAL OSCILLATOR	



PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
B1	K1KA90BA0282	BOARD TO BOARD 90P	
B2	K1KA20A00280	BOARD TO BOARD 20P	
P1001	K1MN12BA0088	CONNECTOR 12P	

FPC CONNECTORS

Ref. No.	Part No.	Part Name & Description	Remarks
FP1	K1MN08BA0088	CONNECTOR 8P	
FP2	K1MN18BA0197	CONNECTOR 18P	
FP3	K1MN10BA0197	CONNECTOR 10P	
FP4	K1MN18BA0088	CONNECTOR 18P	
FP5	K1MN08BA0088	CONNECTOR 8P	
FP6	K1MN12BA0088	CONNECTOR 12P	
FP8	K1MN28BA0196	CONNECTOR 28P	
FP10	K1MN18BA0091	CONNECTOR 18P	
FP7001	K1MN10BA0197	CONNECTOR 10P	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
IP1	K5H2022A0008	FUSE CHIP 32V 2A	
IP2	ERBSE2R00U	CIUCUIT PROTECTOR CHIP 32V 2A	

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T1001	G5DYA0000105	TRANSFORMER SWITCHING	PV-GS29PL
T1001	G5DYA0000106	TRANSFORMER SWITCHING	PV-GS39PL,PV-GS69PL

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK7001	K2HC105E0007	AUDIO VIDEO PIN JACK SOCKET	
JK7002	K1FB104E0015	DV MINI JACK SOCKET	
JK7003	K2HZ105E0007	USB MINI JACK SOCKET	

16.2.2. CAMERA P.C.B.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC301	C0CBCBC00130	IC, LINEAR	
IC302	AN12073A-VB	IC, LOGIC	E.S.D.
IC303	C1AB00002039	IC, LOGIC	E.S.D.
or IC303	MN31121SASE1	IC, LOGIC	E.S.D.
IC701	C1AB00001877	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q701	B1ADMB000004	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D301	MA2S111008	DIODE SI CHIP	
or D301	B0ACCK000003	DIODE SI CHIP	
or D301	MA2S11100L	DIODE SI CHIP	
D6301	B3AAB0000038	LIGHT EMITTING DIODE RED	PV-GS39PL,PV-GS69PL

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R302	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R303	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R304	ERJ3GEYJ181V	MGF CHIP 1/16W 180	
R305	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R311	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R312	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R702	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R704	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R705	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R706	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R707	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R708	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R709	ERJ3GEYJ184V	MGF CHIP 1/16W 180K	
R710	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R711	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R712	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R713	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R714	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R715	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R716	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R718	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R719	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R721	ERJ3GEYJ684V	MGF CHIP 1/16W 680K	
R722	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R723	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R724	ERJ3GEYJ151V	MGF CHIP 1/16W 150	
R726	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R727	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6301	ERJ3GEY0R00V	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R6302	ERJ3GEY0R00V	MGF CHIP 1/16W 0 L	PV-GS39PL,PV-GS69P
R6303	ERJ3GEY0R00V	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R6304	ERJ3GEY0R00V	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R6305	ERJ3GEY0R00V	MGF CHIP 1/16W 0	PV-GS39PL,PV-GS69PL
R6306	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	PV-GS39PL,PV-GS69PL

Ref. No.	Part No.	Part Name & Description	Remarks
R6307	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	PV-GS39PL,PV-GS69PL
R6308	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	PV-GS39PL,PV-GS69PL
R6309	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	PV-GS39PL,PV-GS69PL
R6310	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	PV-GS39PL,PV-GS69PL
R6311	ERJ3GEYJ220V	MGF CHIP 1/16W 22	PV-GS39PL,PV-GS69PL
R6312	ERJ3GEYJ220V	MGF CHIP 1/16W 22	PV-GS39PL,PV-GS69PL
R6313	ERJ3GEYJ220V	MGF CHIP 1/16W 22	PV-GS39PL,PV-GS69PL
R6314	ERJ3GEYJ220V	MGF CHIP 1/16W 22	PV-GS39PL,PV-GS69PL
R6315	ERJ3GEYJ220V	MGF CHIP 1/16W 22	PV-GS39PL,PV-GS69PL
R6316	ERJ3GEYJ100V	MGF CHIP 1/16W 10	PV-GS39PL,PV-GS69PL
R9901	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9902	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9903	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9904	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9905	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9906	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R9913	ERJ3GEYJ203V	MGF CHIP 1/16W 20K	
R9914	ERJ3GEYJ203V	MGF CHIP 1/16W 20K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C301	F1H1A105A036	C CHIP 10V 1UF	
C302	F1H1A105A036	C CHIP 10V 1UF	
C303	F1H1C104A041	C CHIP 16V 0.1UF	
C304	F1H1H100A735	C CHIP 50V 10PF	
C305	F1H1H100A735	C CHIP 50V 10PF	
C306	F1H1A105A036	C CHIP 10V 1UF	
C307	F1H1A105A036	C CHIP 10V 1UF	
C308	F1H1C104A041	C CHIP 16V 0.1UF	
C309	F1H1A105A036	C CHIP 10V 1UF	
C310	F1H1C104A041	C CHIP 16V 0.1UF	
C311	F1H1A224A012	C CHIP 10V 0.22UF	
C312	F1H1A105A036	C CHIP 10V 1UF	
C313	F1J1A106A023	C CHIP 10V 10UF	
C314	F1H1C104A041	C CHIP 16V 0.1UF	
C315	F1H1C104A041	C CHIP 16V 0.1UF	
C316	F1K1A1060017	C CHIP 10V 10UF	
C317	F1K1C475A011	C CHIP 16V 4.7UF	
C318	F1H1C104A041	C CHIP 16V 0.1UF	
C319	F1H1C104A041	C CHIP 16V 0.1UF	
C320	F1H1C104A041	C CHIP 16V 0.1UF	
C321	F1K1A1060017	C CHIP 10V 10UF	
C322	F1H1C104A041	C CHIP 16V 0.1UF	
C328	F1H1H102A219	C CHIP 50V 0.001UF	
C329	F1H1C104A041	C CHIP 16V 0.1UF	
C701	F1H1A105A036	C CHIP 10V 1UF	
C702	F1H1A105A036	C CHIP 10V 1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C703	F1H1A224A012	C CHIP 10V 0.22UF	
C704	F1H1A105A036	C CHIP 10V 1UF	
C705	F3F1A226A026	TANTALUM CHIP 10V 22UF	
C708	F1H1C104A041	C CHIP 16V 0.1UF	
C709	F1H1H103A219	C CHIP 50V 0.01UF	
C710	F1H1A105A036	C CHIP 10V 1UF	
C711	F1H1H102A219	C CHIP 50V 0.001UF	
C712	F1H1C473A041	C CHIP 16V 0.047UF	
C713	F3E0J106A009	TANTALUM CHIP 6.3V 10UF	
C714	F1H1H103A219	C CHIP 50V 0.01UF	
C715	ECJ1VB1H471K	C CHIP 50V 470PF	
C716	ECJ1VC1H101J	C CHIP 50V 100PF	
C717	F1H1A105A019	C CHIP 10V 1UF	
C718	F1H1H472A219	C CHIP 50V 4700PF	
C720	F1H1H103A219	C CHIP 50V 0.01UF	
C721	F1H1A105A019	C CHIP 10V 1UF	
C722	F1H1A105A036	C CHIP 10V 1UF	
C6301	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	PV-GS39PL,PV-GS69PL
C6302	F1H1C104A041	C CHIP 16V 0.1UF	PV-GS39PL,PV-GS69PL
C6303	F1H1C104A041	C CHIP 16V 0.1UF	PV-GS39PL,PV-GS69PL
C6304	ECJ1VC1H050D	C CHIP 50V 5PF	PV-GS39PL,PV-GS69PL
C6305	ECJ1VC1H050D	C CHIP 50V 5PF	PV-GS39PL,PV-GS69PL
C6306	ECJ1VC1H050D	C CHIP 50V 5PF	PV-GS39PL,PV-GS69PL
C6307	ECJ1VC1H050D	C CHIP 50V 5PF	PV-GS39PL,PV-GS69PL
C6308	ECJ1VC1H050D	C CHIP 50V 5PF	PV-GS39PL,PV-GS69PL

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L301	G1C100KA0031	COIL CHIP 10UH	
L302	G1C100KA0031	COIL CHIP 10UH	
L303	G1C100KA0031	COIL CHIP 10UH	
L6301	G1C100M00010	COIL CHIP 10UH	PV-GS39PL,PV-GS69PL

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X301	H0J360500013	CRYSTAL OSCILLATOR CHIP	

FPC CONNECTORS

Ref. No.	Part No.	Part Name & Description	Remarks
FP301	K1MN14BA0197	CONNECTOR 14P	
FP701	K1MN22BA0197	CONNECTOR 22P	
FP9902	K1MN22A00065	CONNECTOR 22P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW9901	ESE13V01B	SWICH	
SW9902	K0F111A00472	SWITCH PUSH	
SW9903	K0D113B00087	SWITCH SLIDE	
SW9904	ESE22MH52	SWITCH DETECT	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
721	K1NA09E00063	SD UNIT	PV-GS39PL,PV-GS69PL

16.2.3. FRONT C.B.A.

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC4801	C0ABBB000369	IC, LINEAR	
or IC4801	C0ABBB000262	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q4301	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q4302	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q4305	2SB1218ARL	TRANSISTOR SI PNP CHIP	
Q4306	UNR9112J08	TRANSISTOR COMPLX CMP SI PNP CHIP	
or Q4306	B1GDCFLL0019	TRANSISTOR SI PNP CHIP	
or Q4306	B1GDCFLL0020	TRANSISTOR SI PNP CHIP	
Q4307	UNR9213J08	TRANSISTOR COMPLX CMP SI NPN CHIP	
or Q4307	B1GBCFNN0029	TRANSISTOR SI NPN CHIP	
or Q4307	B1GBCFNN0030	TRANSISTOR SI NPN CHIP	
Q4801	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q4801	B1ABCF000104	TRANSISTOR SI NPN CHIP	
Q6501	2SD10300SL	TRANSISTOR SI NPN CHIP	
Q6502	2SD2216J08	TRANSISTOR SI NPN CHIP	
or Q6502	B1ABCF000104	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D4301	B3AFB0000126	LIGHT EMITTING DIODE RED	
D4302	B0BC6R2A0127	DIODE ZENER CHIP 6.2V	
D4303	B0BC6R2A0127	DIODE ZENER CHIP 6.2V	
D6503	MA3S132D0L	DIODE SI CHIP	
D6504	B3GA00000041	LIGHT EMITTING DIODE	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R4301	D0HB470ZA003	MGF CHIP 1/16W 47	
R4302	D0HB470ZA003	MGF CHIP 1/16W 47	
R4305	ERA3YED472V	MGF CHIP 1/16W 4.7K	
R4306	ERA3YED333V	MGF CHIP 1/16W 33K	
R4307	ERA3YED682V	MGF CHIP 1/16W 6.8K	
R4308	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4802	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4803	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R4804	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4805	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R4806	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4807	D0HB392ZA002	MGF CHIP 1/16W 3.9K	
R4808	ERJ3GEYJ124V	MGF CHIP 1/16W 120K	
R4809	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4810	D0HB392ZA002	MGF CHIP 1/16W 3.9K	
R6501	ERJ3GEYJ560V	MGF CHIP 1/16W 56	PV-GS69PL
R6502	ERJ3GEYJ683V	MGF CHIP 1/16W 68K	PV-GS69PL
R6503	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R6504	ERJ3GEYJ106V	MGF CHIP 1/16W 10M	
R6505	ERJ3GEYJ225V	MGF CHIP 1/16W 2.2M	
R6506	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R6507	ERJ3GEYJ182V	MGF CHIP 1/16W 1.8K	
R6508	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6509	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C4301	F1H1A105A036	C CHIP 10V 1UF	
C4801	F1H1A105A036	C CHIP 10V 1UF	
C4802	F1H1A105A036	C CHIP 10V 1UF	
C4803	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C4804	F1H1H822A219	C CHIP 50V 8200PF	
C4805	F1H1C273A041	C CHIP 16V 0.027UF	
C4806	F1H1C273A041	C CHIP 16V 0.027UF	
C4808	F1H1C273A041	C CHIP 16V 0.027UF	
C4809	F1H1H822A219	C CHIP 50V 8200PF	
C4810	F1H1C273A041	C CHIP 16V 0.027UF	
C4812	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C6501	F3F0J106A032	TANTALUM CHIP 6.3V 10UF	PV-GS69PL
C6502	F1H1C104A008	C CHIP 16V 0.1UF	PV-GS69PL
C6503	F1H0J474A002	C CHIP 6.3V 0.47UF	
C6504	F1H1C104A041	C CHIP 16V 0.1UF	

FPC CONNECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
FP6501	K1MN12BA0089	CONNECTOR 12P	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
701	LSEK0628	ELECTRIC CONDENSER MICROPHONE UNIT	
702	LSMG0136	MIC DAMPER	
703	LSSC0832	FRONT EARTH PLATE	
704	B3RAB0000039	INFRARED RECEIVER	PV-GS69PL
705	LSJB8337	FRONT FLEXIBLE PRINTED CIRCUIT	

16.2.4. LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR (PV-GS29PL)

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q8101	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8102	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8103	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8104	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8105	XP0450100L	TRANSISTOR COMPLX CMP SI NPN CHIP	
Q8106	XP0440100L	TRANSISTOR COMPLX CMP SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D8109	MA2S728008	DIODE SI CHIP	
or D8109	B0JCDD000002	DIODE SI CHIP	
or D8109	MA2S72800L	DIODE SI CHIP	
D8110	MA2S728008	DIODE SI CHIP	
or D8110	B0JCDD000002	DIODE SI CHIP	
or D8110	MA2S72800L	DIODE SI CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8101	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8102	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8103	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8104	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8105	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8106	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8107	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8108	D0HB470ZA003	MGF CHIP 1/16W 47	
R8109	D0HB470ZA003	MGF CHIP 1/16W 47	
R8110	D0HB470ZA003	MGF CHIP 1/16W 47	
R8111	D0HB470ZA003	MGF CHIP 1/16W 47	
R8112	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8113	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8114	ERA3YKD104V	MGF CHIP 1/16W 100K	
R8115	ERA3YED123V	MGF CHIP 1/16W 12K	
R8116	ERA3YKD184V	MGF CHIP 1/16W 180K	
R8117	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R8118	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R8119	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8120	ERJ3GEYJ113V	MGF CHIP 1/16W 11K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8101	F1H1H471A737	C CHIP 50V 470PF	
C8102	F1H1H471A737	C CHIP 50V 470PF	
C8103	F1H1H471A737	C CHIP 50V 470PF	
C8104	F1J1C2250003	C CHIP 16V 2.2UF	
C8105	F1J1C2250003	C CHIP 16V 2.2UF	
C8106	F1H1C104A041	C CHIP 16V 0.1UF	
C8107	ECJ3YB1C475K	C CHIP 16V 4.7UF	
C8108	F1J1C1050028	C CHIP 16V 1UF	
C8109	F1J1C1050028	C CHIP 16V 1UF	
C8110	F1J1C1050028	C CHIP 16V 1UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8101	G1C100M00010	COIL CHIP 10UH	
L8102	G1C100M00010	COIL CHIP 10UH	
L8103	G1C100M00010	COIL CHIP 10UH	
L8104	G1C100M00010	COIL CHIP 10UH	

FPC CONNECTORS

Ref. No.	Part No.	Part Name & Description	Remarks
FP8101	K1MN26BA0196	CONNECTOR 26P	
FP8102	K1MN24BA0196	CONNECTOR 24P	

16.2.5. LIQUID CRYSTAL DISPLAY BACKLIGHT P.C.B. NR (PV-GS39PL, PV-GS69PL)

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q8101	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8102	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8103	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8104	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8105	2SD1819ARL	TRANSISTOR SI NPN CHIP	
Q8106	2SD1819ARL	TRANSISTOR SI NPN CHIP	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8101	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8102	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8103	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8104	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8105	D0HB470ZA003	MGF CHIP 1/16W 47	
R8106	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8107	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8108	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8109	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8110	D0HB470ZA003	MGF CHIP 1/16W 47	
R8111	D0HB470ZA003	MGF CHIP 1/16W 47	
R8112	D0HB470ZA003	MGF CHIP 1/16W 47	
R8113	D0HB470ZA003	MGF CHIP 1/16W 47	
R8114	D0HB470ZA003	MGF CHIP 1/16W 47	
R8115	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8116	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8117	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8118	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R8119	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8120	ERJ3GEYJ106V	MGF CHIP 1/16W 10M	
R8122	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8123	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8124	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8125	ERJ3GEY0R00V	MGF CHIP 1/16W 0	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8101	F3F0J226A032	TANTALUM CHIP 6.3V 22UF	
C8105	F1J1A106A024	C CHIP 10V 10UF	
C8109	ECJ3YB1E105K	C CHIP 25V 1UF	
C8110	ECJ3YB1E105K	C CHIP 25V 1UF	
C8111	ECJ3YB1E105K	C CHIP 25V 1UF	
C8112	ECJ3YB1E105K	C CHIP 25V 1UF	
C8113	F1H1C104A041	C CHIP 16V 0.1UF	
C8114	ECJ3YB1E105K	C CHIP 25V 1UF	
C8115	F1J1A1050004	C CHIP 10V 1UF	
C8116	F1J1A1050004	C CHIP 10V 1UF	
C8117	F1J1A1050004	C CHIP 10V 1UF	
C8118	F1J1A1050004	C CHIP 10V 1UF	
C8125	F1H1A224A012	C CHIP 10V 0.22UF	
C8126	F1H1H153A219	C CHIP 50V 0.015UF	
C8127	F1H1H471A737	C CHIP 50V 470PF	
C8128	F1H1H471A737	C CHIP 50V 470PF	
C8129	F1H1H471A737	C CHIP 50V 470PF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8101	G1C100M00010	COIL CHIP 10UH	
L8102	G1C100M00010	COIL CHIP 10UH	

FPC CONNECTORS

Ref. No.	Part No.	Part Name & Description	Remarks
FP8101	K1MN26BA0196	CONNECTOR 26P	
FP8102	K1MN36BA0059	CONNECTOR 36P	

17. Schematic Diagrams for Printing with Letter Size

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN P.C.B. (SYSTEM CONTROL/SERVO SECTION)

MODE PIN NO.	REC	PLAY	STOP	FF	REW
IC2001					
1	7.5	7.5	7.5	7.5	7.5
2	1.9	0.9	0.2	1.9	1.9
3	0	0	1.8	0	0
4	1.7	1.7	0	1.7	1.7
5	0.4	0.4	0	0.4	0.4
6	0.4	0.4	0	0.4	0.4
7	1.2	1.2	1.2	1.2	1.2
8	0	0	0	0	0
9	0	0	0	0	0
10	1.9	1.9	1.9	1.9	1.9
11	1.6	1.6	1.9	1.6	1.6
12	3.0	3.0	8.1	3.4	3.0
13	2.2	2.2	2.2	2.2	2.2
14	1.5	1.5	0.1	1.7	1.5
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	1.4	0	2.6
18	2.5	2.5	2.5	2.5	2.5
19	1.5	1.5	0	1.7	1.5
20	---	---	---	---	---
21	1.5	1.5	0	1.7	1.5
22	1.5	1.5	0	1.7	1.5
23	0	0	0	0	0
24	0	0	0	0	0
25	7.9	7.9	8.1	7.9	7.9
26	0	0	0	0	0
27	0.6	0.6	0	2.4	2.6
28	0.5	0.6	0	2.4	2.6
29	0.5	0.6	0	2.4	2.6
30	2.4	2.4	2.4	2.4	2.4
31	2.4	2.4	2.4	2.4	2.4
32	0.6	0.6	0.6	0.6	0.6
33	0	0	0	0	0
34	0	0	0	0	0
35	0.5	0.5	0.5	0.5	0.5
36	1.5	1.5	1.5	1.5	1.5
37	1.5	1.5	1.5	1.5	1.5
38	1.0	1.1	8.1	4.6	5.1
39	2.2	2.2	0.1	2.2	2.2
40	0.3	0.3	0.3	0.3	0.3
41	1.2	1.2	1.2	1.2	1.2
42	1.2	1.2	1.2	1.2	1.2
43	1.9	1.9	0	1.9	1.9
44	0	0	0	0	0
45	1.4	1.4	1.4	1.4	1.4
46	1.4	1.4	1.4	1.4	1.4
47	---	---	---	---	---
48	1.2	1.2	1.2	1.2	1.2
49	1.2	1.2	1.2	1.2	1.2
50	1.2	1.2	1.2	1.2	1.2
51	1.2	1.2	1.2	1.2	1.2
52	1.2	1.2	1.2	1.2	1.2
53	1.2	1.2	1.2	1.2	1.2
54	1.0	1.0	0.2	1.0	1.0

MODE PIN NO.	REC	PLAY	STOP	FF	REW
55	0.2	0.2	0	0.2	0.2
56	1.9	1.9	1.9	1.9	1.9
57	1.0	1.0	0	0.9	0.9
58	0	0	0	0	0
59	2.9	2.9	2.9	2.9	2.9
60	1.9	1.9	1.9	1.9	1.9
61	0	0	0	0	0
62	1.0	1.0	1.0	1.0	1.0
63	7.7	7.7	7.4	7.5	7.5
64	7.9	7.9	8.1	7.9	7.9
IC2002					
1	---	---	---	1.8	1.7
2	1.5	1.5	1.5	1.5	1.5
3	1.5	1.5	1.5	1.5	1.5
4	0	0	0	0	0
5	1.5	0	1.5	1.5	1.5
6	1.5	0	1.5	1.5	1.5
7	---	0	0	1.8	1.8
8	5.0	5.0	5.0	5.0	5.0
IC6001					
A1	---	---	---	---	---
A2	---	---	---	---	---
A3	0	0	0	0	0
A4	2.8	2.8	2.8	2.8	2.8
A5	2.8	2.8	2.8	2.8	2.8
A6	1.2	1.2	1.2	1.2	1.2
A7	2.8	2.8	2.8	2.8	2.8
A8	0	0	0	0	0
A9	1.5	1.5	1.5	1.5	1.5
A10	---	---	---	---	---
A11	0	0	0	0	0
A12	---	---	---	---	---
A13	0	0	0	0	0
A14	0	0	0	0	0
A15	---	---	---	---	---
A16	---	---	---	---	---
A17	0.8	0.8	0.8	0.8	0.8
B1	2.9	2.9	2.9	2.9	2.9
B2	2.9	2.9	2.9	2.9	2.9
B3	2.8	2.8	2.8	2.8	2.8
B4	2.2	2.2	2.2	2.2	2.2
B5	2.0	2.0	2.0	2.0	2.0
B6	1.4	1.4	1.4	1.4	1.4
B7	0	0	0	0	0
B8	0	0	0	0	0
B9	---	---	---	---	---
B10	---	---	---	---	---
B11	0	0	0	0	0
B12	---	---	---	---	---
B13	0	0	0	0	0
B14	1.9	1.9	1.9	1.9	1.9
B15	---	---	---	---	---
B16	---	---	---	---	---
B17	0	0	0	0	0
B18	0.8	0.8	0.8	0.8	0.8

MODE PIN NO.	REC	PLAY	STOP	FF	REW
C1	1.1	1.1	1.1	1.1	1.1
C2	1.1	1.1	1.1	1.1	1.1
C3	2.8	2.8	2.8	2.8	2.8
C4	1.4	1.4	1.4	1.4	1.4
C5	2.0	2.0	2.0	2.0	2.0
C6	1.4	1.4	1.4	1.4	1.4
C7	2.8	2.8	2.8	2.8	2.8
C8	0	0	0	0	0
C9	---	---	---	---	---
C10	---	---	---	---	---
C11	1.9	1.9	1.9	1.9	1.9
C12	---	---	---	---	---
C13	---	---	---	---	---
C14	---	---	---	---	---
C15	---	---	---	---	---
C16	---	---	---	---	---
C17	2.5	2.5	2.5	2.5	2.5
C18	---	---	---	---	---
D1	---	---	---	---	---
D2	1.2	1.2	1.2	1.2	1.2
D3	---	---	---	---	---
D4	2.5	2.5	2.5	2.5	2.5
D5	1.8	0.5	0.5	0.5	0.5
D6	2.7	2.7	2.7	2.7	2.7
D7	0	0	0	0	0
D8	2.5	2.5	2.5	2.5	2.5
D9	0	0	0	0	0
D10	---	---	---	---	---
D11	---	---	---	---	---
D12	---	---	---	---	---
D13	---	---	---	---	---
D14	---	---	---	---	---
D15	1.9	1.9	1.9	1.9	1.9
D16	---	---	---	---	---
D17	---	---	---	---	---
D18	---	---	---	---	---
E1	1.1	1.1	1.1	1.1	1.1
E2	0.8	0.8	0.8	0.8	0.8
E3	---	---	---	---	---
E4	1.2	1.2	1.2	1.2	1.2
E5	---	---	---	---	---
E6	2.8	2.8	2.8	2.8	2.8
E7	0	0	0	0	0
E8	2.8	2.8	2.8	2.8	2.8
E9	2.8	2.8	2.8	2.8	2.8
E10	---	---	---	---	---
E11	---	---	---	---	---
E12	---	---	---	---	---
E13	---	---	---	---	---
E14	---	---	---	---	---
E15	2.5	2.5	2.5	2.5	2.5
E16	---	---	---	---	---
E17	---	---	---	---	---
E18	2.5	2.5	2.5	2.5	2.5
F1	0	0	0	0	0

MODE PIN NO.	REC	PLAY	STOP	FF	REW
F2	---	---	---	---	---
F3	---	---	---	---	---
F4	---	---	---	---	---
F5	---	---	---	---	---
F7	0	0	0	0	0
F8	0	0	0	0	0
F9	2.9	2.9	2.9	2.9	2.9
F10	1.9	1.9	1.9	1.9	1.9
F11	---	---	---	---	---
F12	0	0	0	0	0
F14	---	---	---	---	---
F15	---	---	---	---	---
F16	---	---	---	---	---
F17	1.9	1.9	1.9	1.9	1.9
F18	---	---	---	---	---
G1	1.5	1.5	1.5	1.5	1.5
G2	---	---	---	---	---
G3	2.5	2.5	2.5	2.5	2.5
G4	0	0	0	0	0
G5	0.9	1.2	1.1	1.1	1.1
G6	---	---	---	---	---
G13	---	---	---	---	---
G14	2.5	2.5	2.5	2.5	2.5
G15	---	---	---	---	---
G16	---	---	---	---	---
G17	---	---	---	---	---
G18	2.5	2.5	2.5	2.5	2.5
H1	---	---	---	---	---
H2	2.9	2.9	2.9	2.9	2.9
H3	0	0	0	0	0
H4	---	---	---	---	---
H5	---	---	---	---	---
H6	---	---	---	---	---
H13	---	---	---	---	---
H14	---	---	---	---	---
H15	---	---	---	---	---
H16	---	---	---	---	---
H17	---	---	---	---	---
H18	---	---	---	---	---
J1	0	0	0	0	0
J2	0	0	0	0	0
J3	0	0	0	0	0
J4	0	0	0	0	0
J5	0	0	0	0	0
J6	2.5	2.5	2.5	2.5	2.5
J13	0	0	0	0	0
J14	---	---	---	---	---
J15	---	---	---	---	---
J16	---	---	---	---	---
J17	---	---	---	---	---
J18	---	---	---	---	---
K1	0	0	0	0	0
K2	0	0	0	0	0
K3	0	0	0	0	0
K4	0	0	0	0	0

MODE PIN NO.	REC	PLAY	STOP	FF	REW
K5	0	0	0	0	0
K6	0	0	0	0	0
K13	---	---	---	---	---
K14	---	---	---	---	---
K15	---	---	---	---	---
K16	---	---	---	---	---
K17	2.9	2.9	2.9	2.9	2.9
K18	---	---	---	---	---
L1	2.9	2.9	2.9	2.9	2.9
L2	0	0	0	0	0
L3	0	0	0	0	0
L4	0	0	0	0	0
L5	2.8	2.8	2.8	2.8	2.8
L6	2.8	2.8	2.8	2.8	2.8
L13	---	---	---	---	---
L14	---	---	---	---	---
L15	2.5	2.5	2.5	2.5	2.5
L16	0.2	0.2	0.2	0.2	0.2
L17	---	---	---	---	---
L18	---	---	---	---	---
M1	0	0	0	0	0
M2	0	0	0	0	0
M3	0	0	0	0	0
M4	0	0	0	0	0
M5	2.7	2.7	2.7	2.7	2.7
M6	2.9	2.9	2.9	2.9	2.9
M13	---	---	---	---	---
M14	---	---	---	---	---
M15	0	0	0	0	0
M16	---	---	---	---	---
M17	---	---	---	---	---
M18	---	---	---	---	---
N1	---	---	---	---	---
N2	2.9	2.9	2.9	2.9	2.9
N3	0	0	0	0	0
N4	2.9	2.9	2.9	2.9	2.9
N5	---	---	---	---	---
N7	0	0	0	0	0
N8	2.9	2.9	2.9	2.9	2.9
N9	2.5	2.5	2.5	2.5	2.5
N10	0	0	0	0	0
N11	1.8	1.8	1.8	1.8	1.8
N12	0	0	0	0	0
N14	---	---	---	---	---
N15	---	---	---	---	---
N16	---	---	---	---	---
N17	---	---	---	---	---
N18	---	---	---	---	---
P1	2.9	2.9	2.9	2.9	2.9
P2	---	---	---	---	---
P3	2.8	2.8	2.8	2.8	2.8
P4	0	0	0	0	0
P5	2.9	2.9	2.9	2.9	2.9
P6	---	---	---	---	---
P7	---	---	---	---	---

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MODE PIN NO.	REC	PLAY	STOP	FF	REW
P8	2.9	2.9	2.9	2.9	2.9
P9	2.7	2.7	2.7	2.7	2.7
P10	---	---	---	---	---
P11	1.8	1.8	1.8	1.8	1.8
P12	0	0	0	0	0
P13	---	---	---	---	---
P14	---	---	---	---	---
P15	---	---	---	---	---
P16	---	---	---	---	---
P17	---	---	---	---	---
P18	---	---	---	---	---
R1	0	0	0	0	0
R2	0	0	0	0	0
R3	---	---	---	---	---
R4	---	---	---	---	---
R5	2.9	2.9	2.9	2.9	2.9
R6	---	---	---	---	---
R7	0	0	0	0	0
R8	1.5	1.3	1.4	1.4	1.4
R9	2.8	2.8	2.8	2.8	2.8
R10	---	---	---	---	---
R11	0	0	0	0	0
R12	---	---	---	---	---
R13	1.8	1.8	1.8	1.8	1.8
R14	---	---	---	---	---
R15	---	---	---	---	---
R16	---	---	---	---	---
R17	---	---	---	---	---
R18	---	---	---	---	---
T1	0	0	0	0	0
T2	0	0	0	0	0
T3	0	0	0	0	0
T4	2.9	2.9	2.9	2.9	2.9
T5	---	---	---	---	---
T6	0	0	0	0	0
T7	2.9	2.9	2.9	2.9	2.9
T8	1.4	1.4	1.4	1.4	1.4
T9	2.9	2.9	2.9	2.9	2.9
T10	---	---	---	---	---
T11	0	0	0	0	0
T12	2.9	2.9	2.9	2.9	2.9
T13	1.8	1.8	1.8	1.8	1.8
T14	1.9	1.9	1.9	1.9	1.9
T15	---	---	---	---	---
T16	---	---	---	---	---
T17	---	---	---	---	---
T18	---	---	---	---	---
U1	1.3	1.3	1.3	1.3	1.3
U2	1.8	1.8	1.8	1.8	1.8
U3	2.9	2.9	2.9	2.9	2.9
U4	0	0	0	0	0
U5	---	---	---	---	---
U6	---	---	---	---	---
U7	2.9	2.9	2.9	2.9	2.9
U8	2.9	2.9	2.9	2.9	2.9

MODE PIN NO.	REC	PLAY	STOP	FF	REW
U9	2.8	2.8	2.8	2.8	2.8
U10	0	0	0	0	0
U11	---	---	---	---	---
U12	1.8	1.8	1.8	1.8	1.8
U13	1.8	1.8	1.8	1.8	1.8
U14	1.9	1.9	1.9	1.9	1.9
U15	1.8	1.8	1.8	1.8	1.8
U16	---	---	---	---	---
U17	---	---	---	---	---
U18	2.9	2.9	2.9	2.9	2.9
V2	1.3	1.3	1.3	1.3	1.3
V3	2.5	2.5	2.5	2.5	2.5
V4	2.8	2.8	2.8	2.8	2.8
V5	0	0	0	0	0
V6	2.9	2.9	2.9	2.9	2.9
V7	2.9	2.9	2.9	2.9	2.9
V8	2.9	2.9	2.9	2.9	2.9
V9	0.5	0.5	0.5	0.5	0.5
V10	0	0	0	0	0
V11	0	0	0	0	0
V12	2.9	2.9	2.9	2.9	2.9
V13	---	---	---	---	---
V14	1.9	1.9	1.9	1.9	1.9
V15	1.8	1.8	1.8	1.8	1.8
V16	---	---	---	---	---
V17	---	---	---	---	---
IC6003					
1	2.9	2.9	2.9	2.9	2.9
2	2.9	2.9	2.9	2.9	2.9
3	2.9	2.9	2.9	2.9	2.9
4	2.9	2.9	2.9	2.9	2.9
5	0	0	0	0	0
6	2.9	2.9	2.9	2.9	2.9
7	---	---	---	---	---
8	2.9	2.9	2.9	2.9	2.9
IC6004					
1	2.5	2.5	2.5	2.5	2.5
2	2.8	2.8	2.8	2.8	2.8
3	2.9	2.9	2.9	2.9	2.9
4	0	0	0	0	0
5	2.9	2.9	2.9	2.9	2.9
6	2.9	2.9	2.9	2.9	2.9
7	2.5	2.5	2.5	2.5	2.5
8	0	0	0	0	0
9	---	---	---	---	---
10	3.3	3.3	3.3	3.3	3.3
11	3.3	3.3	3.3	3.3	3.3
12	0.5	0.5	0.5	0.5	0.5
13	0.9	0.9	0.9	0.9	0.9
14	2.9	2.9	2.9	2.9	2.9
15	3.3	3.3	3.3	3.3	3.3
16	8.1	8.1	8.1	8.1	8.1
IC6005					
1	2.5	2.5	2.5	2.5	2.5
2	3.3	3.3	3.3	3.3	3.3

MODE PIN NO.	REC	PLAY	STOP	FF	REW
3	---	---	---	---	---
4	0	0	0	0	0
Q6002					
E	0	0	0	0	0
C	0	0	0	0	0
B	2.9	2.9	2.9	2.9	2.9
Q6003					
E	0	0	0	0	0
C	7.8	7.8	7.8	7.8	7.8
B	0	0	0	0	0
Q6004					
E	0	0	0	0	0
C	5.0	5.0	5.0	5.0	5.0
B	0	0	0	0	0
Q6008					
E	0	0	0	0	0
C	2.4	1.0	1.1	1.1	1.1
B	0	0	0	0	0
Q6009					
E	0	0	0	0	0
C	1.9	1.9	1.9	1.9	1.9
B	0	0	0	0	0
Q6010					
E	2.8	2.8	2.8	2.8	2.8
C	2.8	2.8	2.8	2.8	2.8
B	2.9	2.9	2.9	2.9	2.9
Q6011					
E	2.8	2.8	2.8	2.8	2.8
C	-1.7	-1.6	-1.8	-1.8	-1.8
B	2.9	2.9	2.9	2.9	2.9
Q6012					
E	2.8	2.8	2.8	2.8	2.8
C	-1.8	-1.7	-2.0	-2.0	-2.0
B	2.9	2.9	2.9	2.9	2.9
Q6013					
E	2.8	2.8	2.8	2.8	2.8
C	2.8	2.8	2.8	2.8	2.8
B	0	0	0	0	0
TP6001	1.6	1.6	1.6	1.6	1.6
TP6002	1.5	1.5	1.5	1.5	1.5
TP6003	0	0	0	0	0
TP6004	0	0	0	0	0
TP6005	0	0	0	0	0
TP6006	0	0	0	0	0
TP6007	0	0	0	0	0
TP6008	0	0	0	0	0
TP6009	0	0	0	0	0
TP6010	0	0	0	0	0
TP6301	1.1	1.1	0.9	0.9	0.9
TP6302	0.8	1.1	0.9	0.9	0.9
TP6303	0.9	0.9	1.0	1.0	1.0
TP6304	0.8	0.8	0.8	1.0	1.0
TP6305	1.2	0.9	0.9	1.0	1.0

[illegible]

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN P.C.B. (POWER/VIDEO/AUDIO SECTION)

MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY	MODE PIN.NO.	REC	PLAY
IC401			55	1.9	1.9	9	4.1	4.1	9	---	---	64	---	---	119	0	0	174	---	---	229	---	---	284	0	0
1	---	---	56	---	---	10	4.1	4.1	10	---	---	65	---	---	120	1.8	1.8	175	---	---	230	---	---	285	0	0
2	---	---	57	---	---	11	2.1	2.1	11	---	---	66	---	---	121	0	0	176	---	---	231	---	---	286	2.6	2.6
3	---	---	58	---	---	12	0.8	0.8	12	0	0	67	0	0	122	1.8	1.8	177	1.8	1.8	232	---	---	287	0	0
4	---	---	59	---	---	13	0.7	0.7	13	---	---	68	1.6	1.6	123	---	---	178	0.5	0.5	233	---	---	288	0	0
5	0	0	60	---	---	14	0	0	14	---	---	69	0	0	124	---	---	179	1.8	1.8	234	---	---	289	0	0
6	3.3	3.3	61	---	---	15	0	0	15	---	---	70	0	0	125	0	0	180	1.0	1.0	235	---	---	290	0	0
7	0.9	0.9	62	---	---	16	2.1	2.1	16	---	---	71	0	0	126	1.2	1.2	181	0.6	0.6	236	0	0	291	---	---
8	---	---	63	1.6	1.6	17	0.8	0.8	17	0	0	72	0	0	127	2.6	2.6	182	1.0	1.0	237	1.8	1.8	292	---	---
9	0.9	0.9	64	0	0	18	1.3	1.3	18	1.6	1.6	73	2.2	2.2	128	0	0	183	0.6	0.6	238	0	0	293	0	0
10	0	0	65	0.9	0.9	19	2.0	2.0	19	---	---	74	2.9	2.9	129	0	0	184	---	---	239	1.8	1.8	294	3.3	3.3
11	1.6	1.6	66	---	---	20	2.0	2.0	20	---	---	75	0	0	130	1.2	1.2	185	0	0	240	0	0	295	3.3	3.3
12	0	0	67	0	0	21	1.3	1.3	21	---	---	76	0	0	131	2.6	2.6	186	---	---	241	2.6	2.6	296	2.9	2.9
13	---	---	68	---	---	22	0.7	0.7	22	---	---	77	---	---	132	0	0	187	0	0	242	2.0	2.0	297	2.9	2.9
14	0	0	69	---	---	23	0.9	.9	23	0	0	78	---	---	133	1.6	1.6	188	---	---	243	1.2	1.2	298	2.9	2.9
15	---	---	70	---	---	24	2.1	2.1	24	---	---	79	2.9	2.9	134	1.6	1.6	189	---	---	244	0	0	299	2.9	2.9
16	1.3	1.3	71	---	---	25	8.1	8.1	25	---	---	80	---	---	135	0	0	190	---	---	245	0	0	300	2.9	2.9
17	---	---	72	---	---	26	3.4	3.4	26	---	---	81	0	0	136	1.6	1.6	191	---	---	246	2.6	2.6	301	2.9	2.9
18	---	---	73	---	---	27	3.2	3.2	27	1.8	1.8	82	---	---	137	0	0	192	---	---	247	2.6	2.6	302	2.9	2.9
19	3.3	3.3	74	---	---	28	0	0	28	---	---	83	---	---	138	0	0	193	1.6	1.6	248	2.0	2.0	303	2.9	2.9
20	1.6	1.6	75	---	---	29	0	0	29	---	---	84	---	---	139	0	0	194	---	---	249	1.2	1.2	304	2.9	2.9
21	0	0	76	---	---	30	4.0	4.0	30	---	---	85	0	0	140	0	0	195	---	---	250	1.6	1.6	305	0	0
22	---	---	77	---	---	31	5.1	5.1	31	---	---	86	1.6	1.6	141	2.9	2.9	196	---	---	251	0	0	306	---	---
23	---	---	78	---	---	32	5.3	5.3	32	1.8	1.8	87	0	0	142	0	0	197	---	---	252	2.6	2.6	307	---	---
24	0	0	79	---	---	33	6.4	6.4	33	---	---	88	0	0	143	0	0	198	1.8	1.8	253	1.9	1.9	308	---	---
25	0	0	80	---	---	34	8.1	8.1	34	---	---	89	2.9	2.9	144	0	0	199	1.0	1.0	254	1.2	1.2	309	---	---
26	---	---	81	---	---	35	2.1	2.1	35	---	---	90	2.9	2.9	145	0	0	200	0	0	255	0	0	310	0	0
27	---	---	82	---	---	36	0.6	0.6	36	1.6	1.6	91	1.6	1.6	146	0	0	201	---	---	256	0	0	311	1.6	1.6
28	---	---	83	---	---	37	1.3	1.3	37	0	0	92	1.6	1.6	147	0	0	202	---	---	257	2.6	2.6	312	---	---
29	---	---	84	---	---	38	2.0	2.0	38	---	---	93	0	0	148	0	0	203	1.8	1.8	258	2.6	2.6	313	1.6	1.6
30	---	---	85	1.0	0	IC1002			39	---	---	94	0	0	149	0	0	204	0	0	259	0	0	314	0	0
31	---	---	86	1.9	1.9	1	3.3	3.3	40	0	1.4	95	2.6	2.6	150	2.8	1.8	205	---	---	260	0	0	315	3.3	3.3
32	---	---	87	0	0	2	0	0	41	0	0	96	1.8	1.8	151	2.8	1.8	206	---	---	261	1.4	1.4	316	---	---
33	---	---	88	---	---	3	5.0	5.0	42	0	0	97	---	---	152	2.8	1.8	207	---	---	262	0	0	317	---	---
34	---	---	89	---	---	IC1003			43	2.6	2.6	98	1.8	1.8	153	2.9	2.9	208	---	---	263	2.6	2.6	318	2.9	2.9
35	---	---	90	---	---	1	2.9	2.9	44	2.6	2.6	99	---	---	154	1.6	1.6	209	---	---	264	2.5	2.5	319	2.8	2.8
36	---	---	91	---	---	2	0.2	0.2	45	0	0	100	---	---	155	1.6	1.6	210	---	---	265	0	0	320	0	0
37	---	---	92	---	---	3	2.9	2.9	46	0	0	101	---	---	156	1.9	1.9	211	---	---	266	1.3	1.3	321	---	---
38	---	---	93	---	---	4	0.2	0.2	47	0	0	102	0.9	0.9	157	0	0	212	---	---	267	0	0	322	2.9	2.9
39	1.6	1.6	94	---	---	5	2.6	2.6	48	0.9	0.9	103	---	---	158	1.8	1.8	213	---	---	268	0	0	323	1.0	1.0
40	0	0	95	---	---	IC1004			49	0.4	0.4	104	---	---	159	1.9	1.9	214	---	---	269	3.3	3.3	324	0	0
41	---	---	96	1.9	1.9	1	2.9	2.9	50	0.2	0.2	105	2.6	2.6	160	1.8	1.8	215	---	---	270	0	0	325	---	---
42	---	---	97	1.9	1.9	2	0	0	51	0	0	106	0	0	161	1.9	1.9	216	---	---	271	0	0	326	---	---
43	---	---	98	---	---	3	2.9	2.9	52	0.6	0.6	107	1.6	1.6	162	---	---	217	---	---	272	3.3	3.3	327	0	1.4
44	---	---	99	---	---	4	---	---	53	2.9	2.9	108	0	0	163	---	---	218	---	---	273	3.2	3.2	328	0	0
45	---	---	100	0	0	5	1.9	1.9	54	0.3	0.3	109	1.6	1.6	164	---	---	219	---	---	274	3.2	3.2	329	---	---
46	---	---	IC1001			IC3001			55	1.2	1.2	110	---	---	165	0	0	220	---	---	275	3.2	3.2	330	3.3	3.3
47	---	---	1	2.0	2.0	1	1.9	1.9	56	1.9	1.9	111	---	---	166	0	0	221	0	0	276	0	0	331	0	0
48	---	---	2	1.3	1.3	2	0	0	57	1.4	1.4	112	---	---	167	0	0	222	---	---	277	3.2	3.2	332	1.6	1.6
49	---	---	3	0.7	0.7	3	0.1	0.1	58	1.7	1.7	113	1.6	1.6	168	0	0	223	---	---	278	0	0	333	2.9	2.9
50	---	---	4	2.1	2.0	4	1.8	1.8	59	1.2	1.2	114	0	0	169	---	---	224	---	---	279	3.3	3.3	334	1.8	1.8
51	---	---	5	8.1	8.1	5	0.8	0.8	60	1.7	1.7	115	2.6	2.6	170	0	0	225	---	---	280	1.6	1.6	335	---	---
52	---	---	6	3.9	3.9	6	1.8	1.8	61	1.2	1.2	116	---	---	171	---	---	226	---	---	281	---	---	336	---	---
53	0.8	0.7	7	4.1	4.1	7	---	---	62	2.9	2.9	117	---	---	172	1.6	1.6	227								

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MODE PIN NO.	REC	PLAY
339	1.8	1.8
340	1.6	1.6
341	0	0
342	1.6	1.6
343	0	0
344	2.6	2.6
345	---	---
346	---	---
347	---	---
348	---	---
349	---	---
350	---	---
351	---	---
352	---	---
353	---	---
354	---	---
355	0	0
356	2.6	2.6
357	0	0
358	1.6	1.6
359	0	0
360	---	---
361	1.9	1.9
362	---	---
363	---	---
364	---	---
IC3101		
1	1.0	1.0
2	0.6	0.6
3	1.0	1.0
4	0.5	0.5
5	0.6	0.6
6	0.6	0.6
7	1.9	1.9
8	---	---
9	0	0
10	---	---
11	2.9	2.9
12	0	0
13	0	0
14	1.9	1.9
15	1.9	1.9
16	1.9	1.9
17	0	0
18	2.9	2.9
19	0.9	0.9
20	1.0	1.0
21	0	0
22	0	0
23	0	0
24	0	0
25	---	---
26	2.9	2.9
27	0	0
28	1.2	1.2

MODE PIN NO.	REC	PLAY
29	0	0
30	5.0	5.0
31	0.5	0.5
32	0.6	0.6
33	0	0
34	0.1	0.1
35	0	0
36	0	0
37	0	0
38	0	0
39	---	---
40	---	---
41	5.0	5.0
42	0	0
43	---	---
44	0	0
45	0	0
46	0	0
47	---	---
48	---	---
49	0	0
50	---	---
51	1.5	1.5
52	1.5	1.5
53	1.5	1.5
54	1.5	1.5
55	2.9	2.9
56	2.9	2.9
57	0	0
58	---	---
59	1.5	1.5
60	1.5	1.5
61	1.5	1.5
62	1.1	1.1
63	0	0
64	0	0
IC3102		
1	0.5	0.5
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	5.0	5.0
IC3201		
1	0	0
2	0	0
3	0	0
4	1.8	1.8
5	---	---
6	0	0
7	1.8	1.8
8	0	0
9	0.6	1.1

MODE PIN NO.	REC	PLAY
10	1.8	1.8
11	0	0.3
12	0	0
13	1.8	1.8
14	0	0
15	1.8	1.8
16	0.9	0.9
17	0	0
18	0	0
19	1.5	1.5
20	---	---
21	2.3	2.3
22	2.5	2.5
23	0	0
24	1.1	1.1
25	1.1	1.1
26	0	0
27	2.5	2.5
28	0.7	0.7
29	1.1	1.1
30	0	0
31	1.8	1.8
32	2.5	2.5
33	1.3	0.2
34	0.7	0.7
35	1.2	1.2
36	1.5	1.5
37	0	0
38	0	0
39	1.9	1.9
40	1.9	1.9
41	0.8	0.8
42	1.9	1.9
43	0	0
44	1.9	1.9
45	1.9	1.9
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0.8	0.8
52	1.8	1.8
53	0	0
54	0	1.9
55	0.2	0.2
56	0.9	0.9
57	0	0
58	0	0
59	---	---
60	---	---
61	0	0
62	---	---
63	0	0
64	0.1	0.1

MODE PIN NO.	REC	PLAY
65	0.1	0.1
66	0	0
67	0.1	0.1
68	0.1	0.1
69	0.9	0.9
70	1.8	1.8
71	0	0
72	0	0
73	0	0
74	0	0
75	0	0
76	---	---
77	---	---
78	0	0
79	---	---
80	1.8	1.8
81	---	---
82	---	---
83	---	---
84	0.9	0.9
85	0	0
86	---	---
87	---	---
88	---	---
89	1.9	1.9
90	1.8	1.8
91	0	0
92	0	0
93	---	---
94	0	0
95	---	---
96	---	---
97	---	---
98	1.8	1.8
99	---	---
100	---	---
101	---	---
102	---	---
103	0	0
104	---	---
105	---	---
106	---	---
107	---	---
108	1.8	1.8
109	1.9	1.9
110	---	---
111	---	---
112	---	---
IC5001		
1	2.9	2.5
2	0	0
3	1.5	1.5
4	2.4	1.8
5	3.0	3.0
6	0.6	1.0

MODE PIN NO.	REC	PLAY
7	0	0
8	0	0
9	0	0
10	0.8	0
11	0	0
12	---	---
13	0	0
14	0.1	0.
15	0	0
16	1.9	1.9
17	1.0	1.0
18	0	1.9
19	0	0
20	1.9	1.9
21	---	---
22	---	---
23	---	---
24	---	---
25	---	---
26	1.2	2.0
27	1.2	2.0
28	4.7	2.0
29	1.5	2.0
30	4.6	2.0
31	4.6	2.0
32	4.6	2.0
33	1.5	2.0
34	---	---
35	0.8	0.8
36	0	0
37	5.0	5.0
38	0	0
39	2.6	1.4
40	0	0
41	2.9	2.3
42	2.9	2.2
43	2.1	2.0
44	---	---
IC8001		
1	1.7	1.7
2	0	0
3	0	0
4	1.8	1.8
5	2.5	2.5
6	1.8	1.8
7	2.5	2.5
8	1.8	1.8
9	2.5	2.5
10	4.3	4.3
11	1.5	1.5
12	4.2	4.2
13	8.4	8.4
14	3.5	3.5
15	3.5	3.5
16	3.2	3.2

MODE PIN NO.	REC	PLAY
17	---	---
18	3.5	3.5
19	1.8	1.8
20	3.5	3.5
21	---	---
22	3.5	3.5
23	2.8	2.8
24	2.8	2.8
25	0	0
26	1.4	1.4
27	1.4	1.4
28	0.4	0.4
29	2.5	2.5
30	2.7	2.7
31	0.2	0.2
32	0	0
33	1.5	1.5
34	1.5	1.5
35	0	0
36	2.8	2.8
37	0	0
38	0.8	0.8
39	1.9	1.9
40	2.8	2.8
41	2.8	2.8
42	2.8	0
43	0	2.8
44	0	0
45	0	0
46	0.5	0.5
47	---	---
48	1.5	1.5
49	0	0
50	---	---
51	---	---
52	---	---
53	---	---
54	0	0
55	0	0
56	0	0
57	0.9	0.9
58	2.9	2.9
59	2.8	2.8
60	2.8	2.8
61	2.9	2.9
62	2.8	2.8
63	1.8	1.8
64	1.8	1.8
IC8002		
1	1.5	1.5
2	1.6	1.6
3	0	0
4	2.8	2.8
5	2.9	2.9

MODE PIN NO.	REC	PLAY
Q401		
E	0	0
C	0	0
B	1.9	1.9
Q1001		
E	8.1	8.0
C	8.1	8.0
B	0	0
Q1004		
1	3.3	3.3
2	8.1	8.1
3	0	0
4	4.8	4.8
5	4.8	4.8
Q1005		
1	5.2	5.2
2	8.1	8.1
3	0	0
4	2.7	2.7
5	2.8	2.8
Q1006		
1	6.5	6.5
2	8.1	8.1
3	0	0
4	0	0
5	1.5	1.5
Q1007		
S	0	0
D	7.6	7.6
G	3.5	3.5
Q1008		
1	8.1	8.1
2	7.9	7.9
3	0	0
4	1.1	1.1
5	1.1	1.1
6	1.1	1.1
Q1009		
1	8.1	8.1
2	7.8	7.8
3	0	0
4	3.0	3.0
5	3.0	3.0
6	3.0	3.0
Q1016		
E	8.7	8.7
C	10.0	10.0
B	9.4	9.4
Q1018		
E	0	0
C	-7.4	-7.4
B	-0.5	-0.5
Q1019		
E	-7.4	-7.5

MODE PIN NO.	REC	PLAY
C	-9.9	-10.0
B	-8.0	-8.1
Q1022		
E	0	0
C	9.4	9.4
B	0.6	0.6
Q1024		
E	0	0
C	2.1	2.1
B	-0.2	-0.2
Q1025		
E	0	0
C	4.1	4.0
B	0	0
Q1026		
E1	0	5.0
E2	0	0
C1	0	0
C2	5.0	5.0
B1	5.0	5.0
B2	0	0
Q1040		
E	5.0	5.0
C	4.9	4.9
B	0	0
Q1041		
E	0	0
C	0	0
B	1.9	1.9
Q4501		
E	0	0
C	5.0	5.0
B	0	0
Q4502		
E	0	0
C	0	0
B	2.9	2.9
TP1	5.0	5.0
TP3	5.0	5.0
TP4	2.9	2.9
TP5	3.3	3.3
TP6	2.9	2.9
TP8	2.6	2.6
TP9	1.9	1.9
TP10	1.6	1.6
TP11	15.0	15.0
TP12	0	0
TP13	-7.4	-7.4
TP14	0	0
TP15	0	0
TP16	0	0
TP17	0	0
TP18	8.7	8.7
TP20	8.1	8.1

[illegible]

VOLTAGE CHART
PV-GS29PL/PV-GS39PL/PV-GS69PL

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

CAMERA P.C.B.

MODE PIN NO.	CAMERA
IC301	
1	5.0
2	0
3	0
4	3.4
5	5.0
IC302	
1	1.2
2	1.7
3	1.2
4	1.7
5	1.4
6	2.9
7	0
8	1.9
9	1.2
10	0.3
11	0.6
12	0
13	0
14	2.9
15	0.2
16	0.4
17	0.9
18	0
19	2.9
20	0
21	0
22	1.5
23	1.5
24	0
25	3.4
26	0.5
27	1.1
28	3.4
29	0
30	1.1
31	3.4
32	1.3
33	---
34	2.9
35	2.9
36	2.9
37	2.9
38	0
39	2.7
40	2.7
41	0.2
42	0.2
43	---
44	---
45	0
46	0
47	0
48	2.9

MODE PIN NO.	CAMERA
49	0.9
50	2.9
51	1.1
52	1.3
53	0.7
54	0.9
55	---
56	0
57	1.0
58	2.0
59	2.9
60	0
61	2.9
62	2.9
63	2.9
64	2.9
IC303	
1	-7.0
2	-7.0
3	-0.2
4	0
5	0
6	3.0
7	0.4
8	2.9
9	0.2
10	2.9
11	---
12	2.7
13	2.9
14	2.7
15	0
16	12.0
17	-6.6
18	-6.6
19	0
20	12.0
IC701	
1	0.1
2	2.9
3	2.9
4	2.9
5	0
6	0
7	0
8	0
9	5.0
10	1.3
11	8.1
12	7.4
13	1.6
14	1.6
15	2.9
16	1.1
17	0

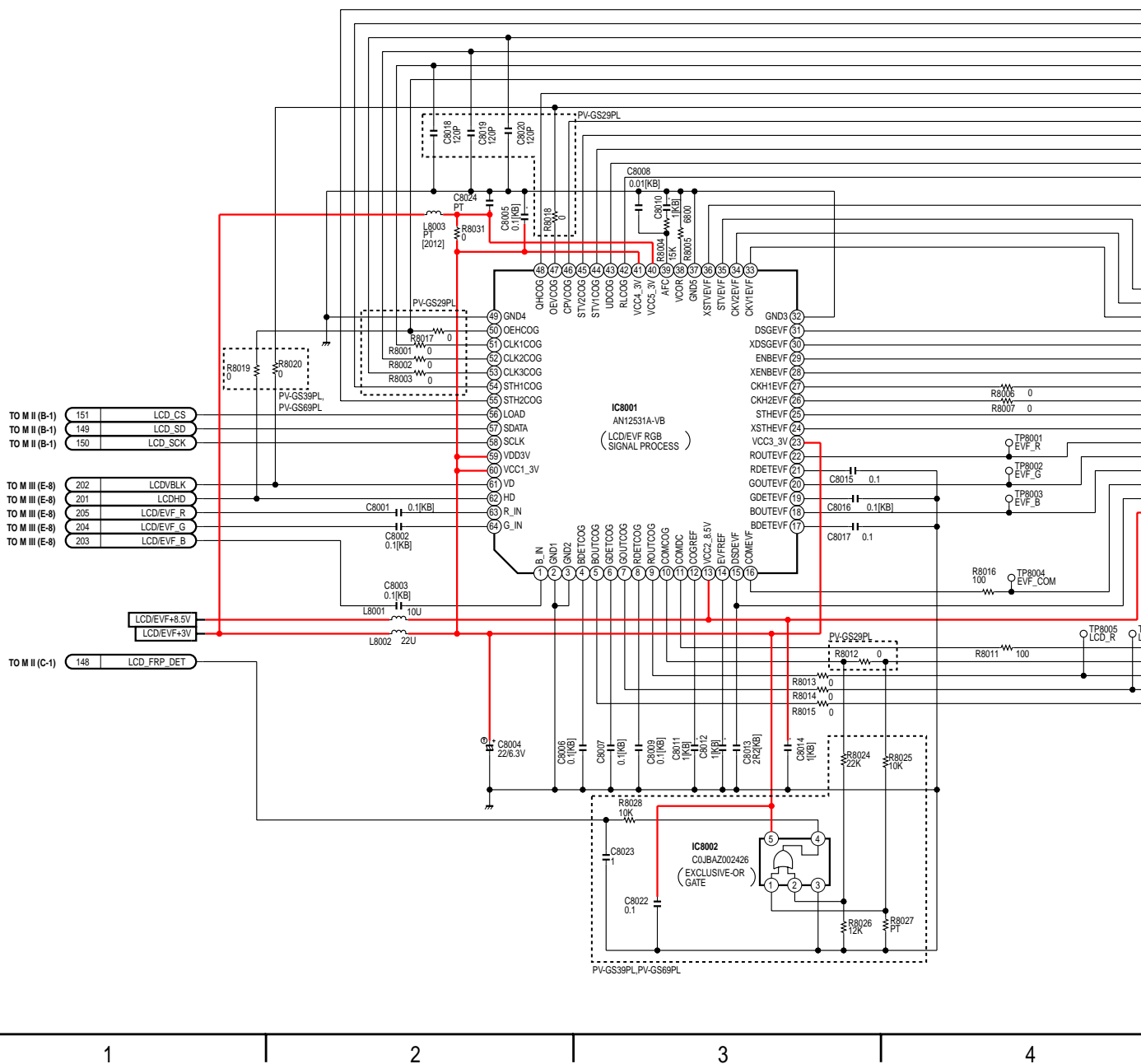
LCD BACKLIGHT P.C.B.
(PV-GS29PL)

[illegible][illegible]

LCD BACKLIGHT P.C.B.
(PV-GS39PL,PV-GS69PL)

[illegible]

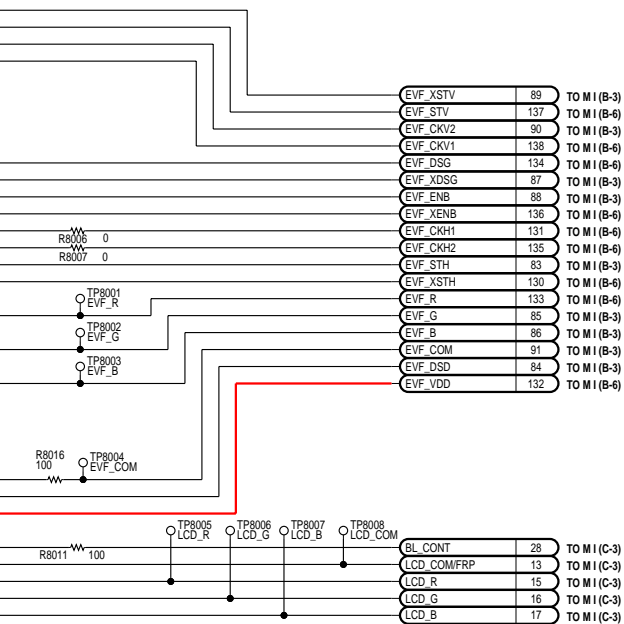
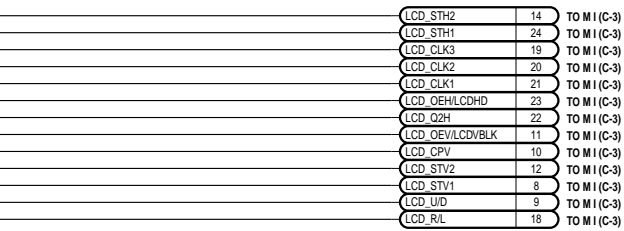
103



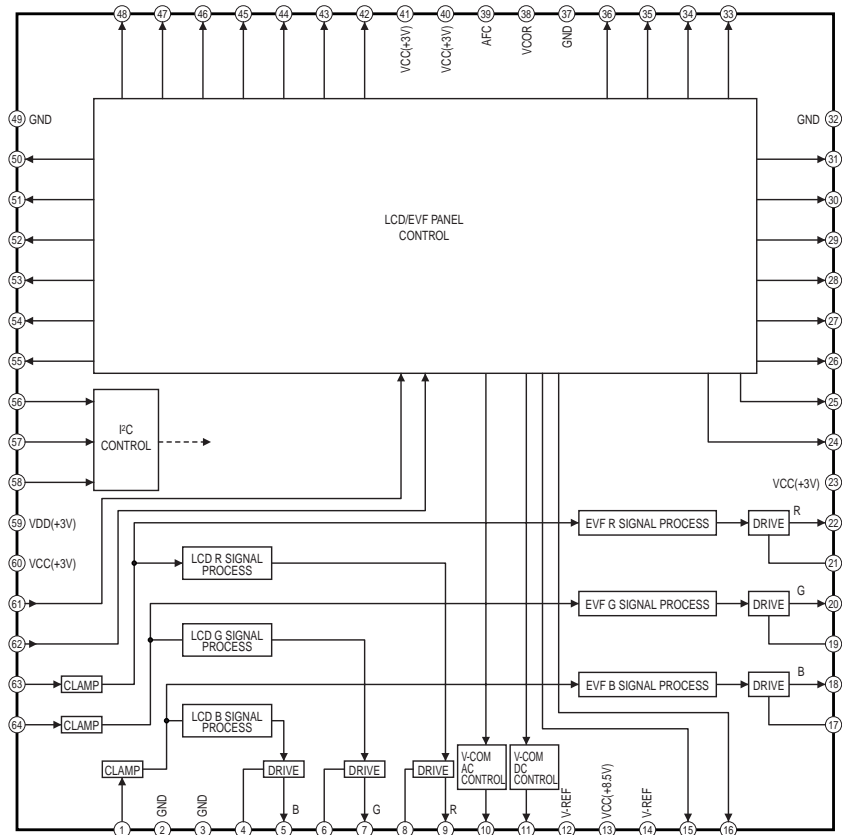
er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

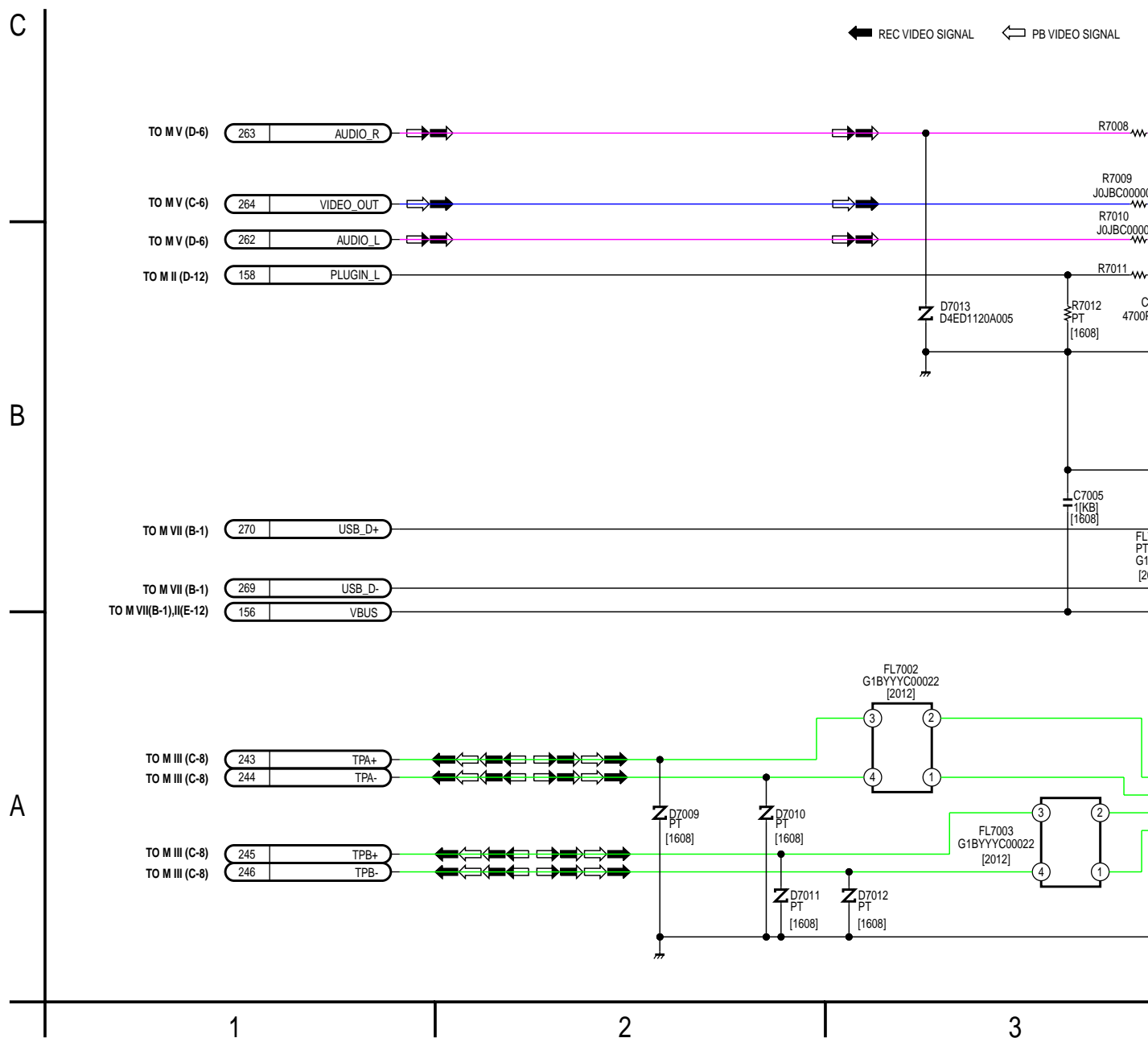


IC8001 IC- DETAIL BLOCK DIAGRAM



MAIN IX SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

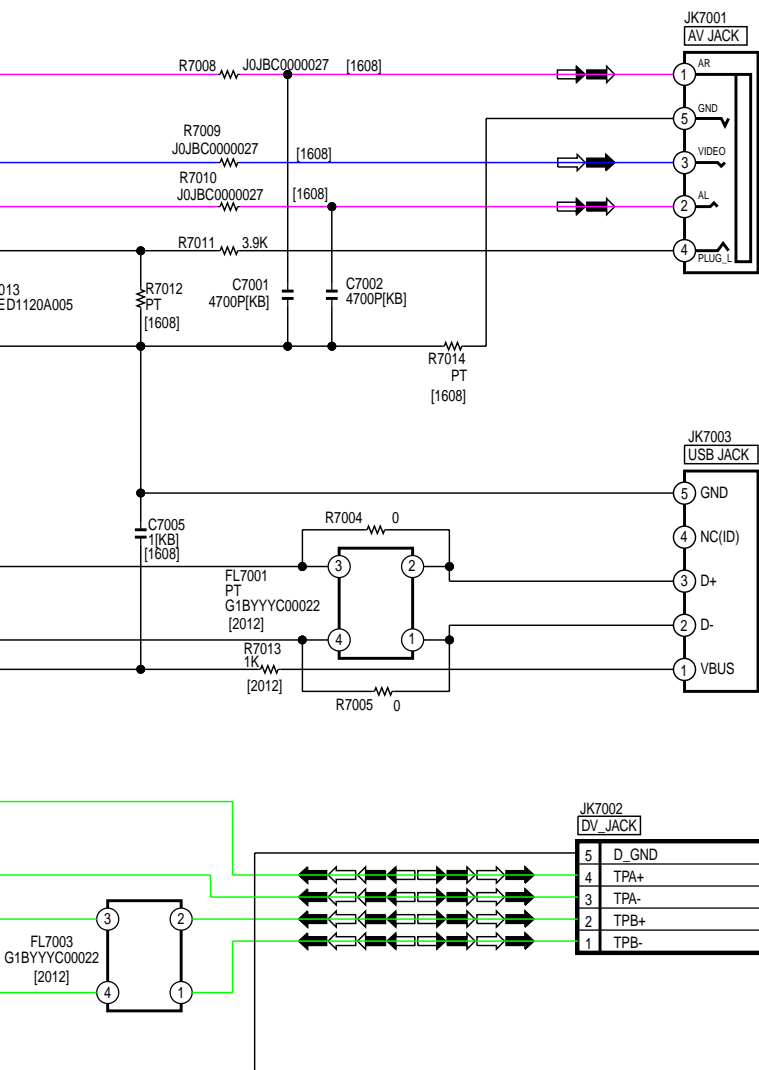


er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NAL ← PB VIDEO SIGNAL ← REC AUDIO SIGNAL ← PB AUDIO SIGNAL




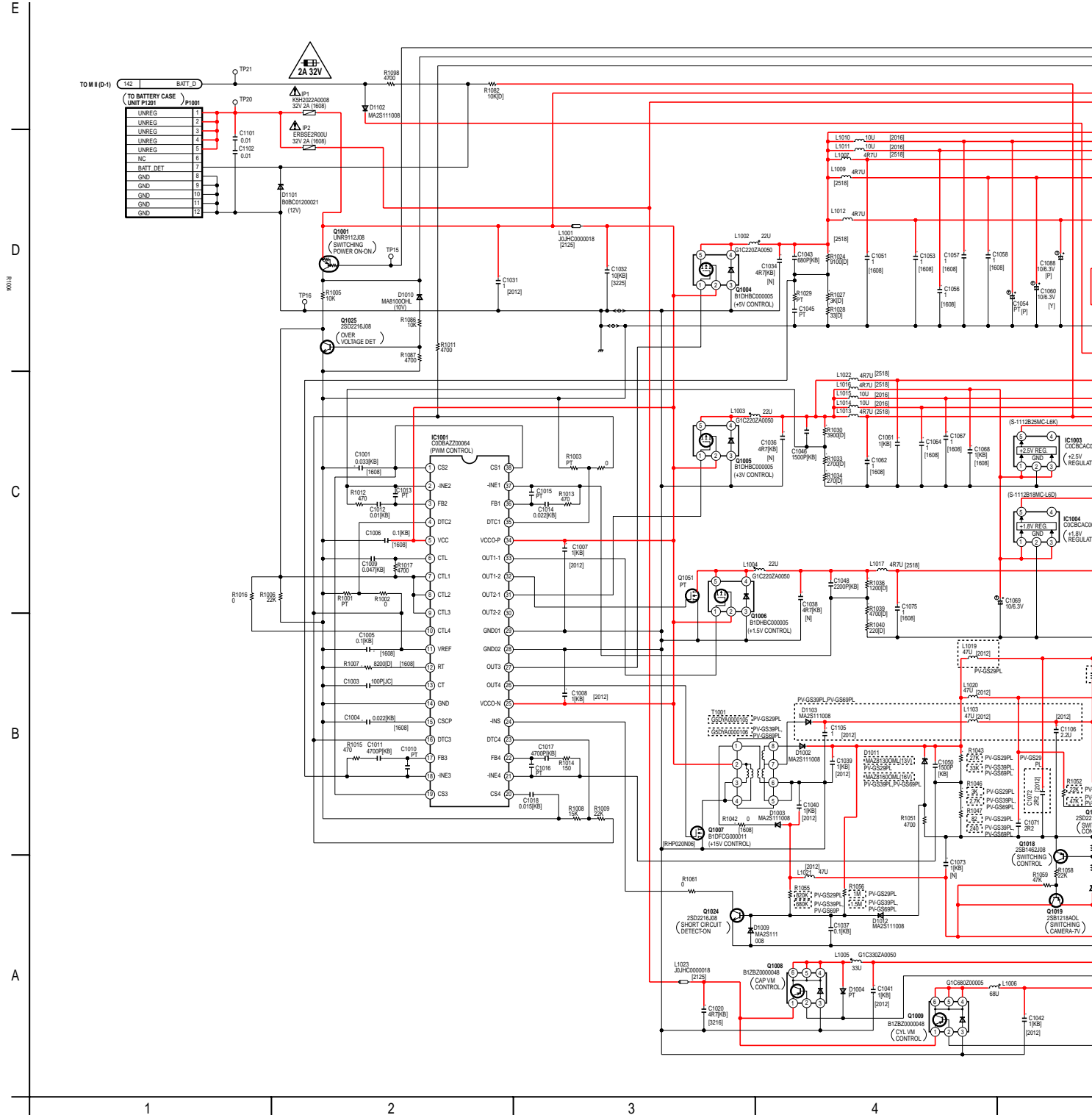
3

4

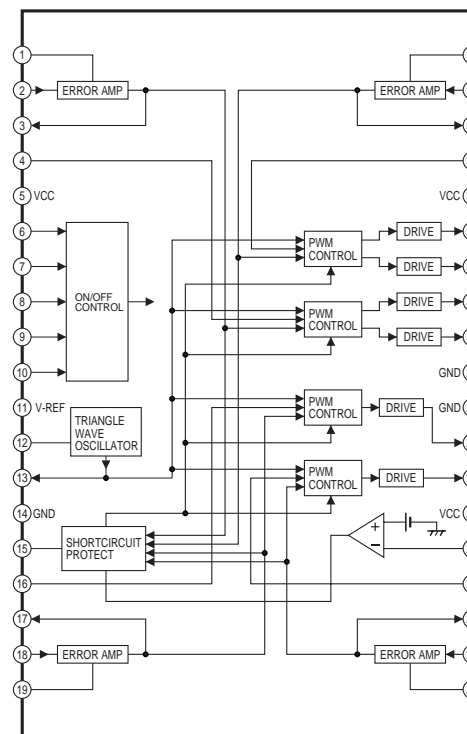
MAIN X SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 2A 32V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MÊME
TYPE 2A 32V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.



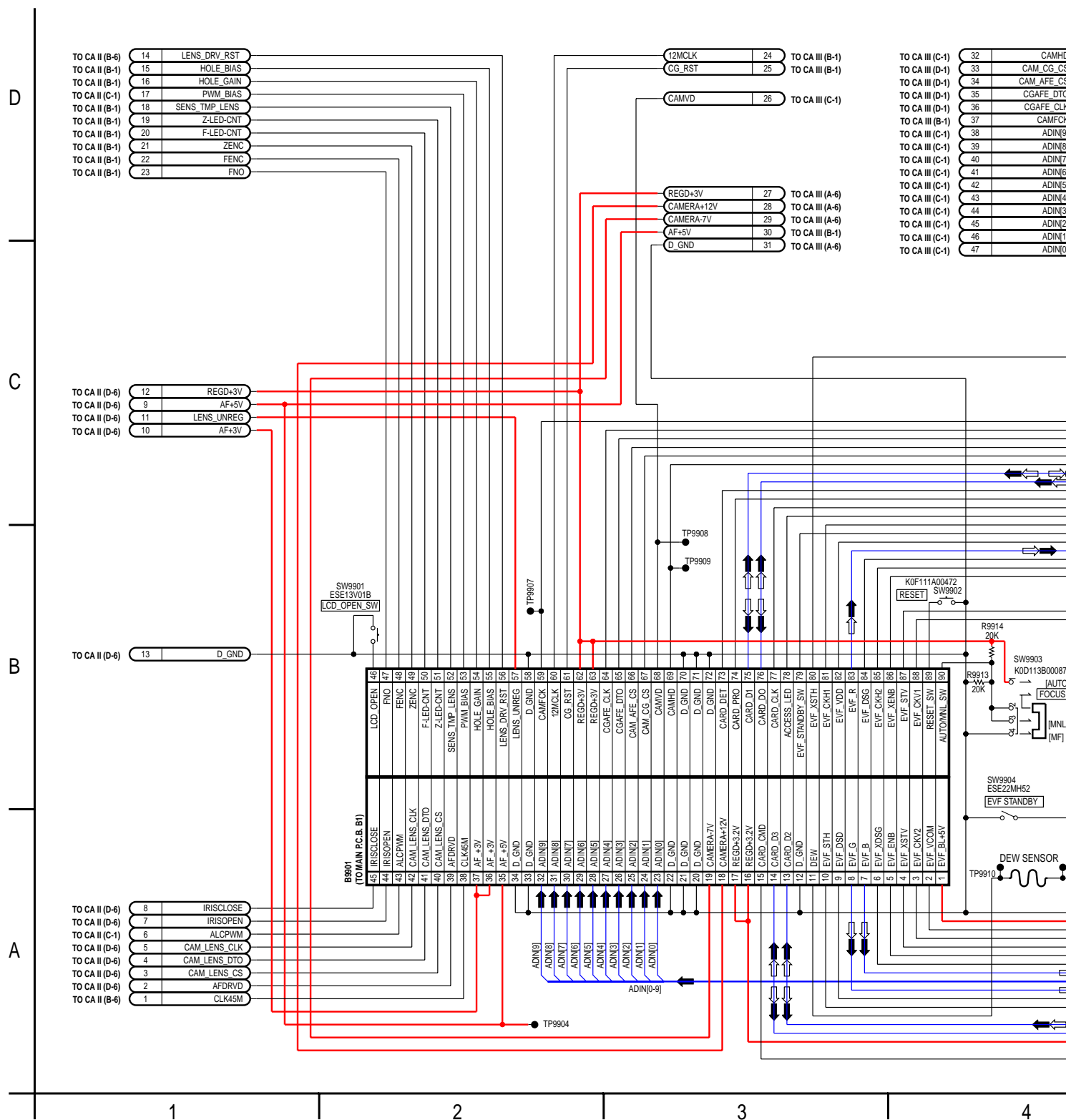
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



12.3. CAMERA SCHEMATIC DIAGRAM

CAMERA I SCHEMATIC DIAGRAM

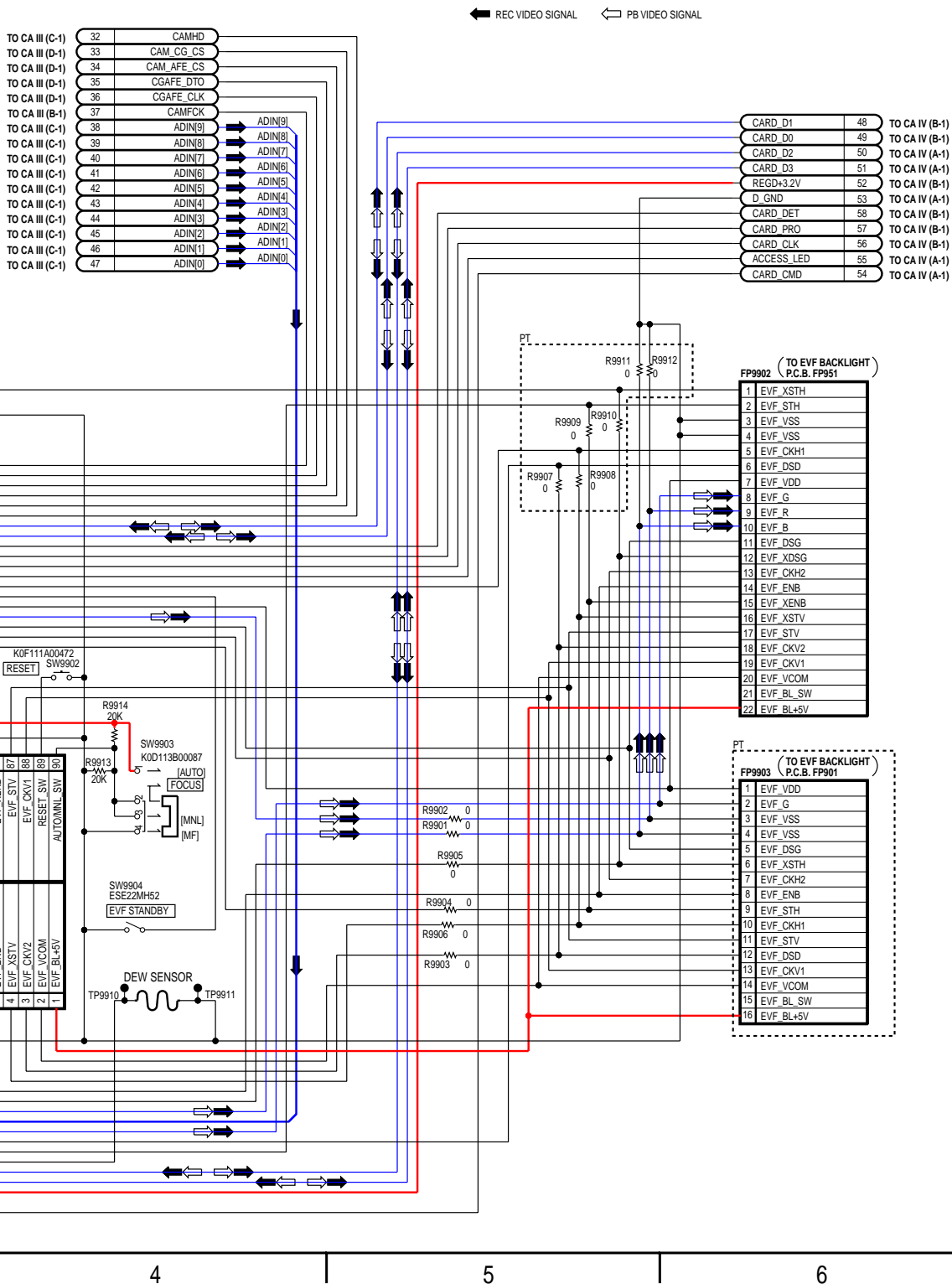
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.



or of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART

LSJB8331

CAMERA I SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

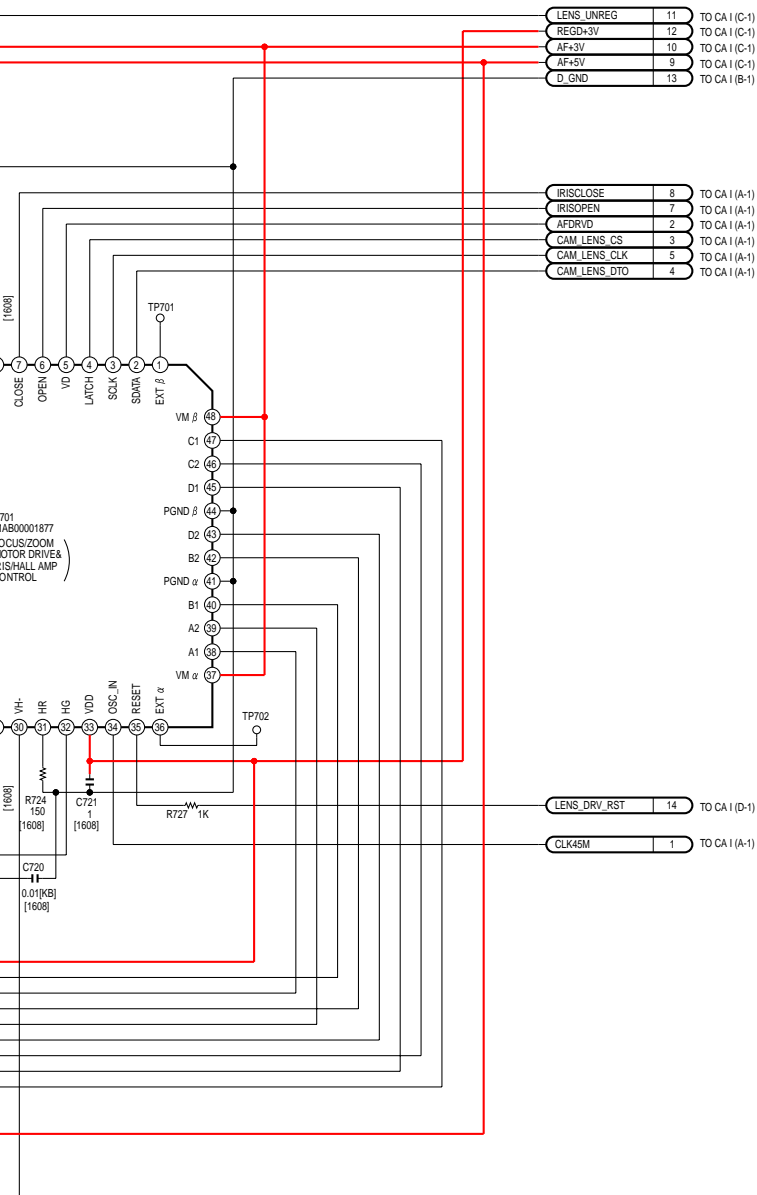
107



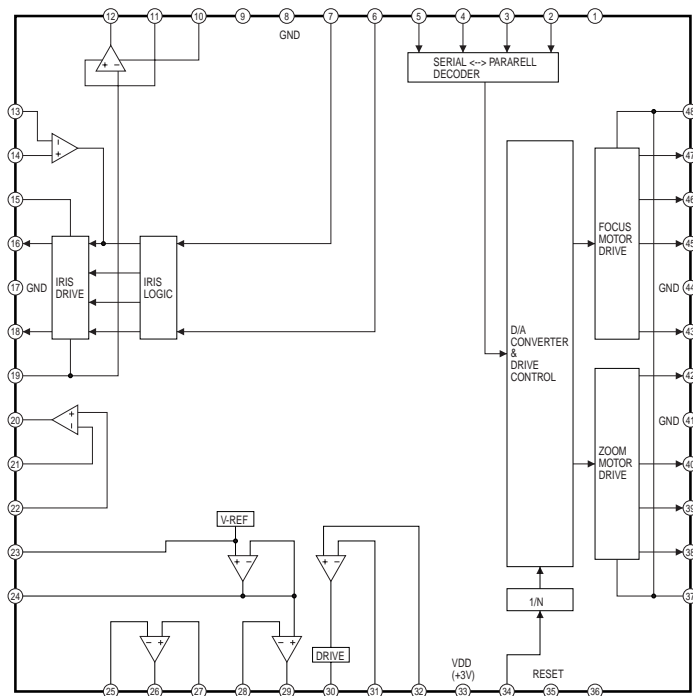
of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



IC701 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

LSJB8331

CAMERA II SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

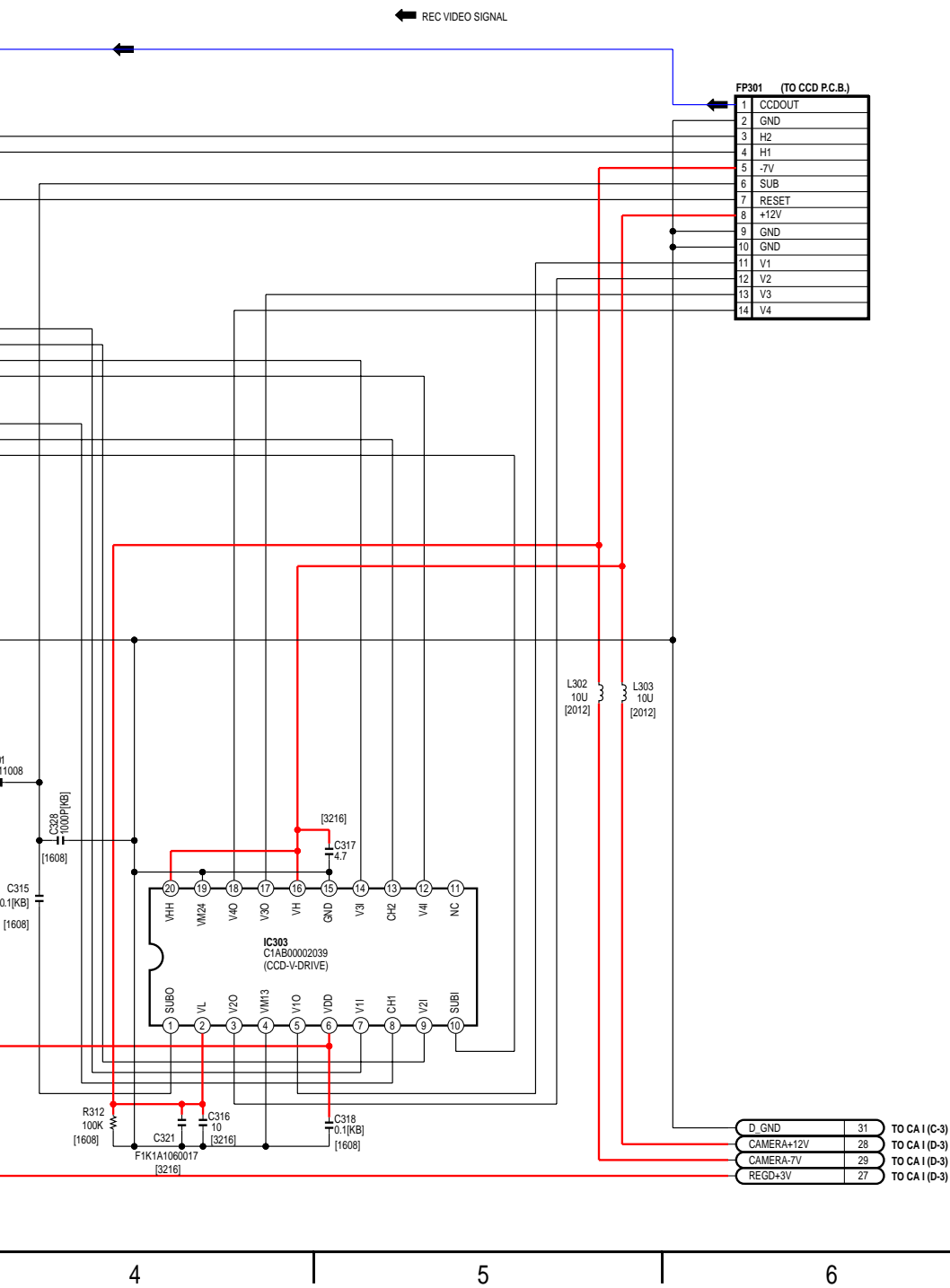
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.



er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



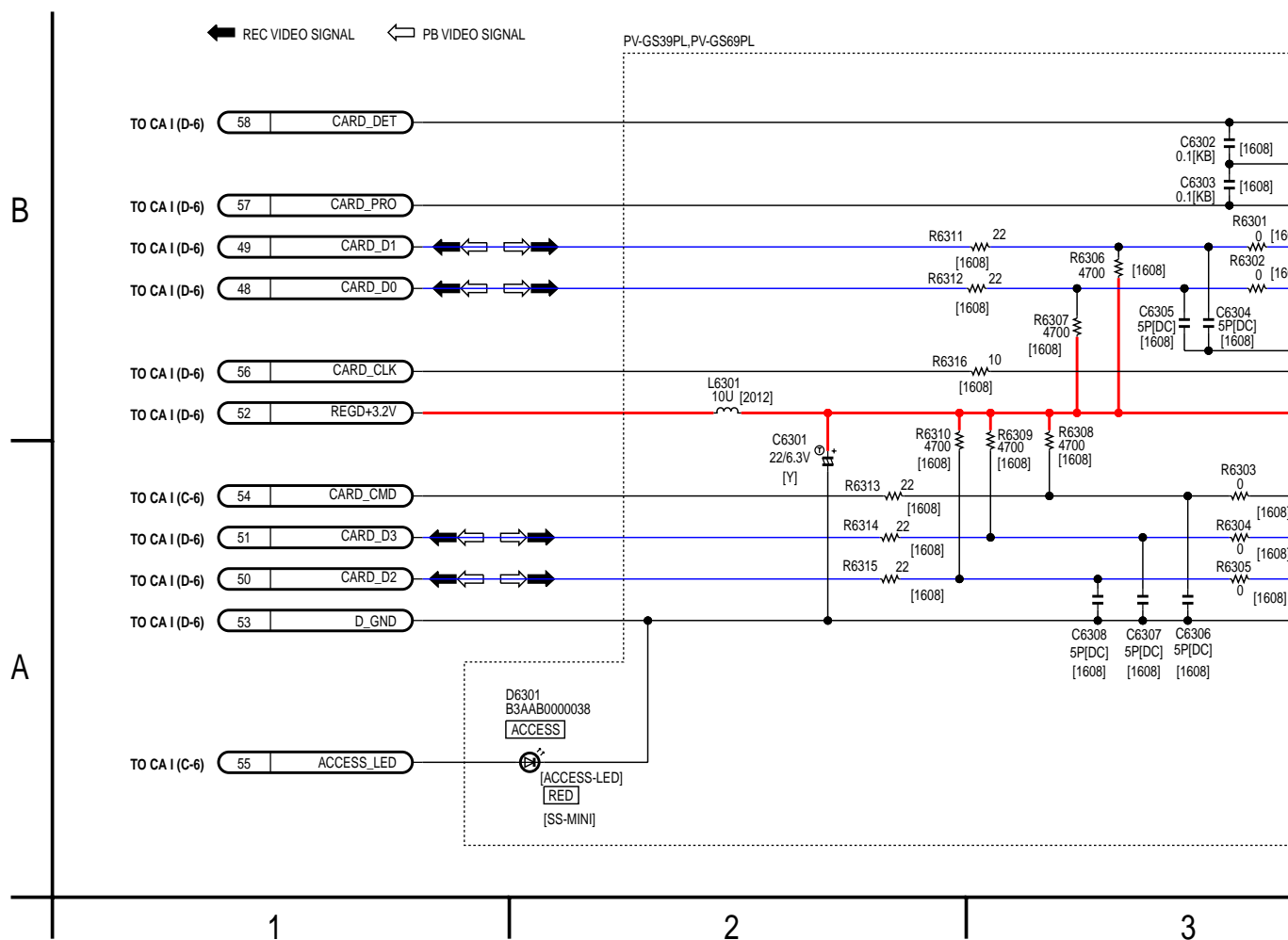
LINK TO VOLTAGE CHART

LSJB8331

CAMERA III SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

CAMERA IV SCHEMATIC DIAGRAM

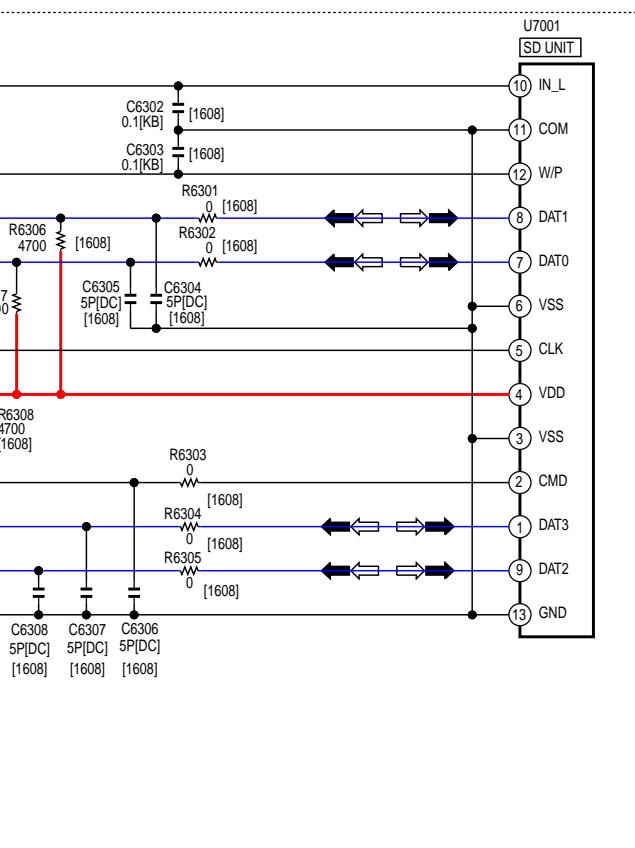
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



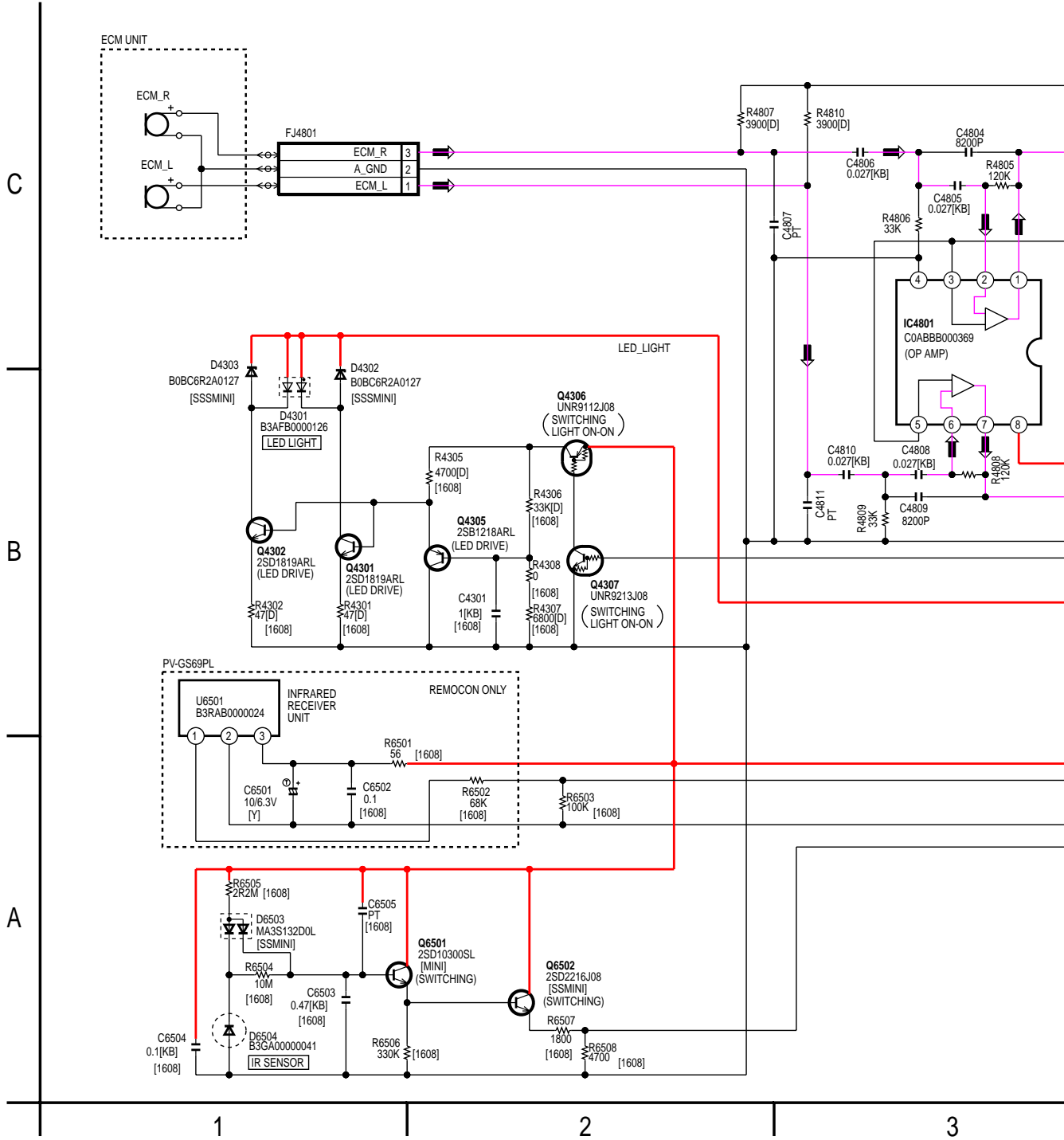
3

4

12.4. FRONT SCHEMATIC DIAGRAM

FRONT SCHEMATIC DIAGRAM

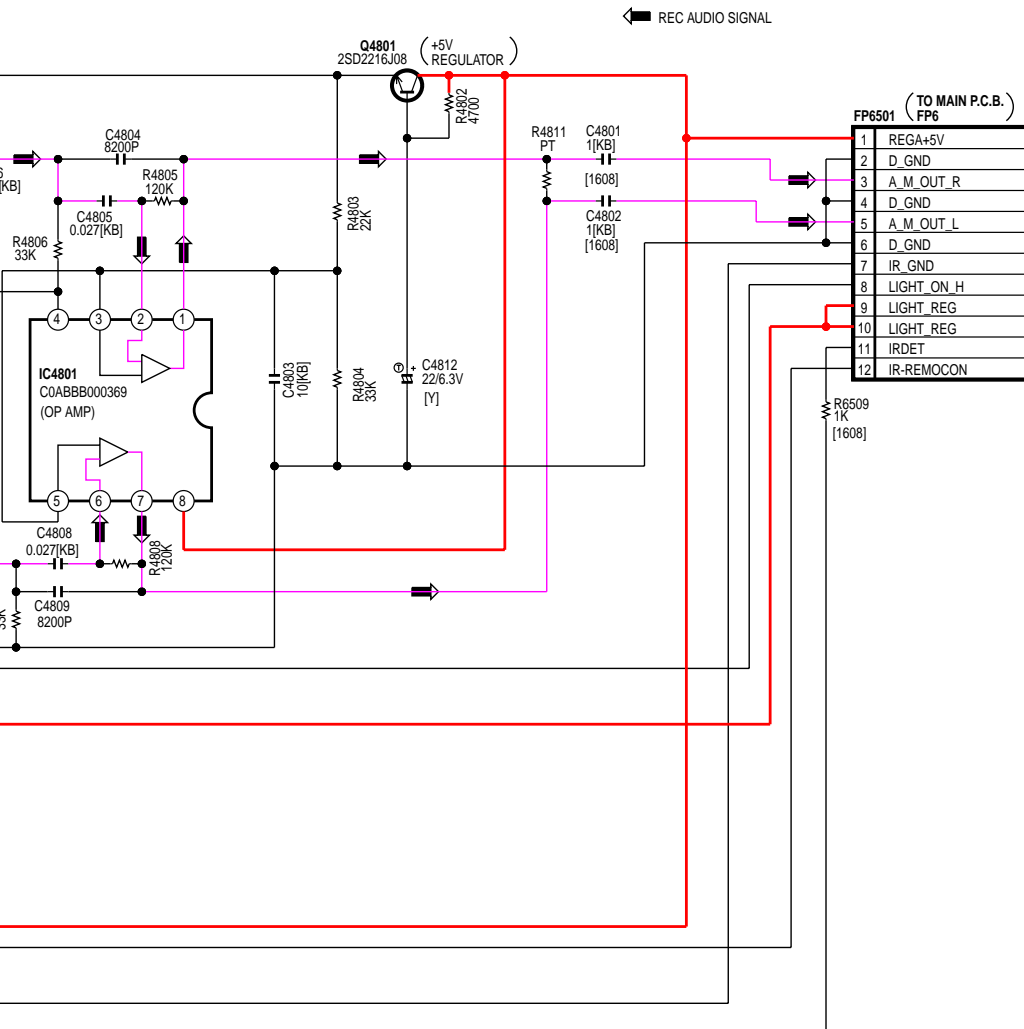
NOTE: For placing a purchase
be sure to use the part
Do not use the part nu



NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



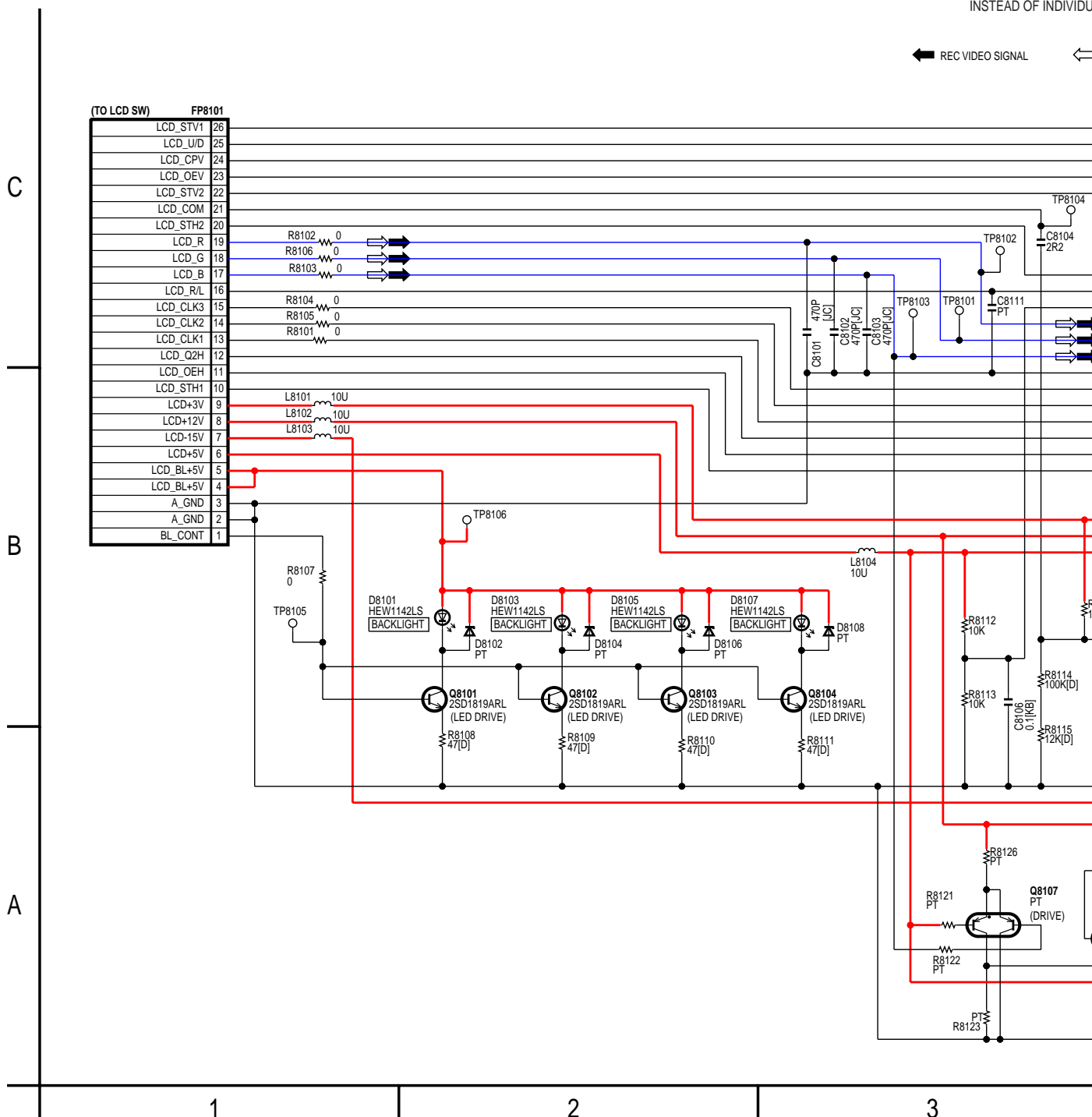
3 | 4 | 5

12.5. LCD BACKLIGHT SCHEMATIC DIAGRAM (Model: PV-GS29PL)

LCD BACKLIGHT SCHEMATIC DIAGRAM (PV-GS29PL)

NOTE: For placing a purchase
be sure to use the part
Do not use the part number

NOTE:
ALL INDIVIDUAL PARTS
ON LCD BACKLIGHT P
WHEN SERVICING THE
INSTEAD OF INDIVIDUAL

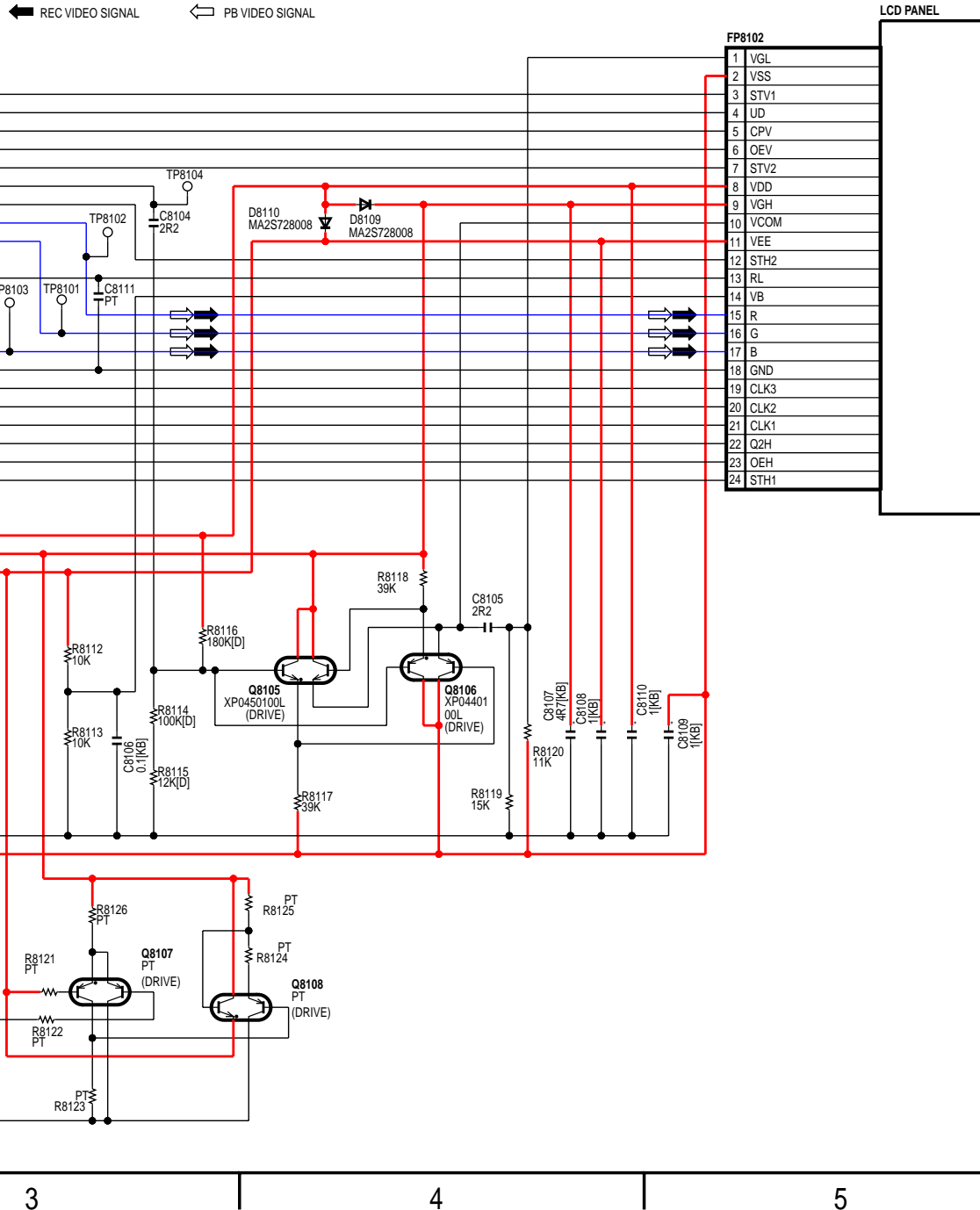


NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, AND D8107
ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS.
WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B.
INSTEAD OF INDIVIDUAL PARTS.



LINK TO VOLTAGE CHART

LSJB8334

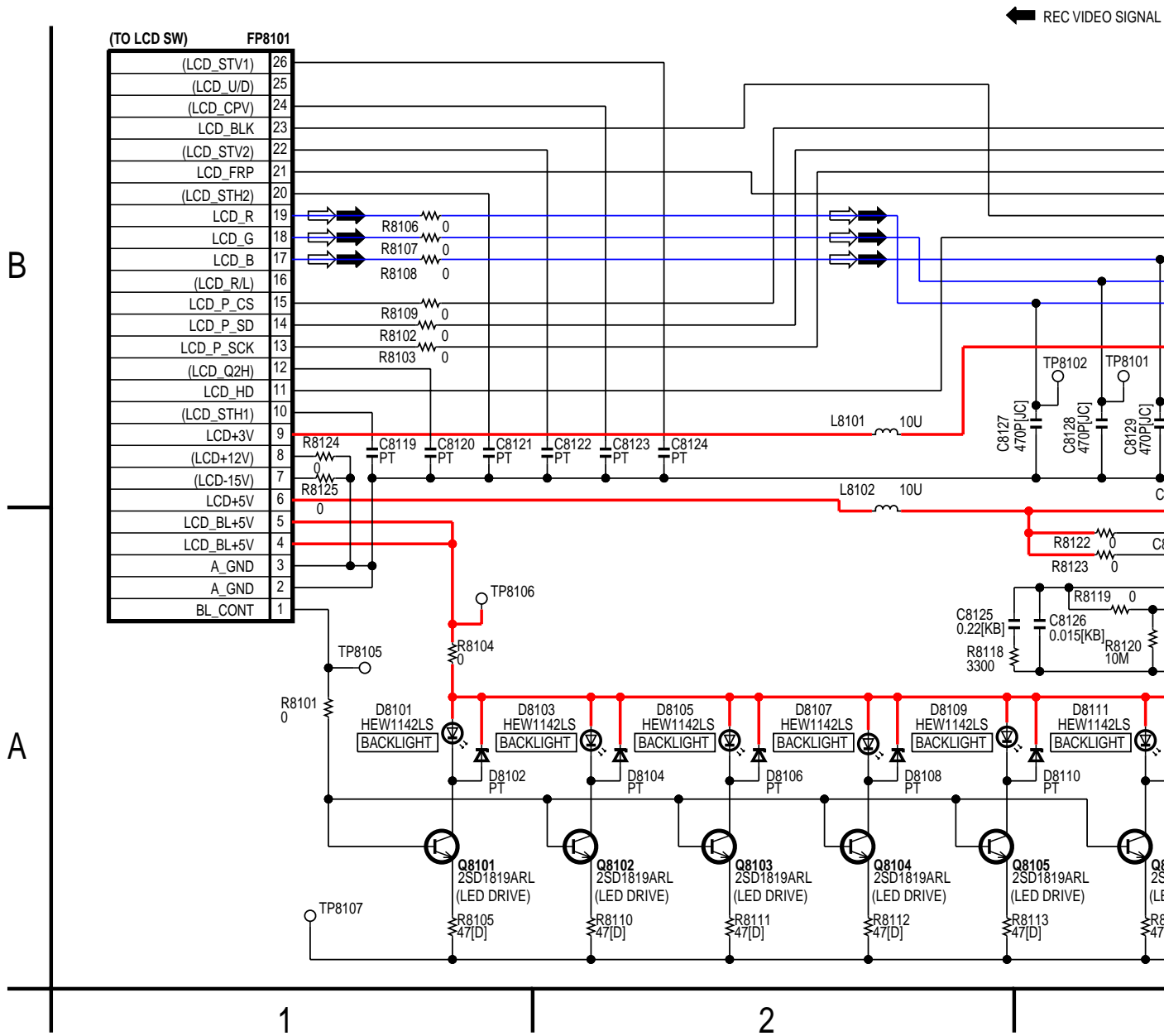
LCD BACKLIGHT SCHEMATIC DIAGRAM
PV-GS29PL

12.6. LCD BACKLIGHT SCHEMATIC DIAGRAM (Models: PV-GS39PL/PV-GS69PL)

LCD BACKLIGHT SCHEMATIC DIAGRAM (PV-GS39PL,PV-GS69PL)

NOTE: For placing a purchase
be sure to use the part
Do not use the part number

NOTE:
ALL INDIVIDUAL PARTS
ON LCD BACKLIGHT P
WHEN SERVICING THE
INDIVIDUAL PARTS.



PV-GS69PL)

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

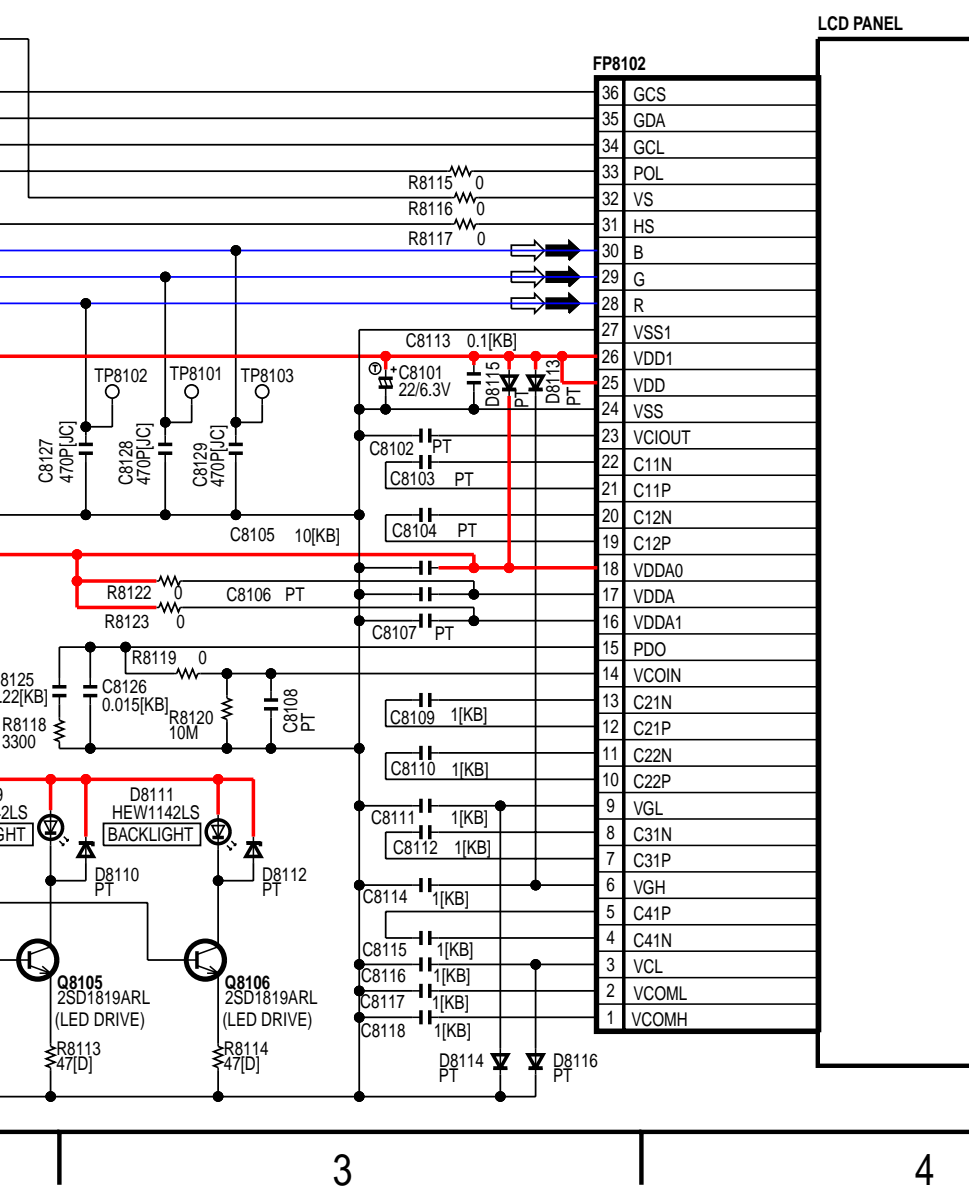
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:

ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, D8107, D8109, AND D8111
ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS.
WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B. INSTEAD OF
INDIVIDUAL PARTS.

REC VIDEO SIGNAL

PB VIDEO SIGNAL



LINK TO VOLTAGE CHART

LSJB8359

LCD BACKLIGHT SCHEMATIC DIAGRAM

PV-GS39PL/PV-GS69PL

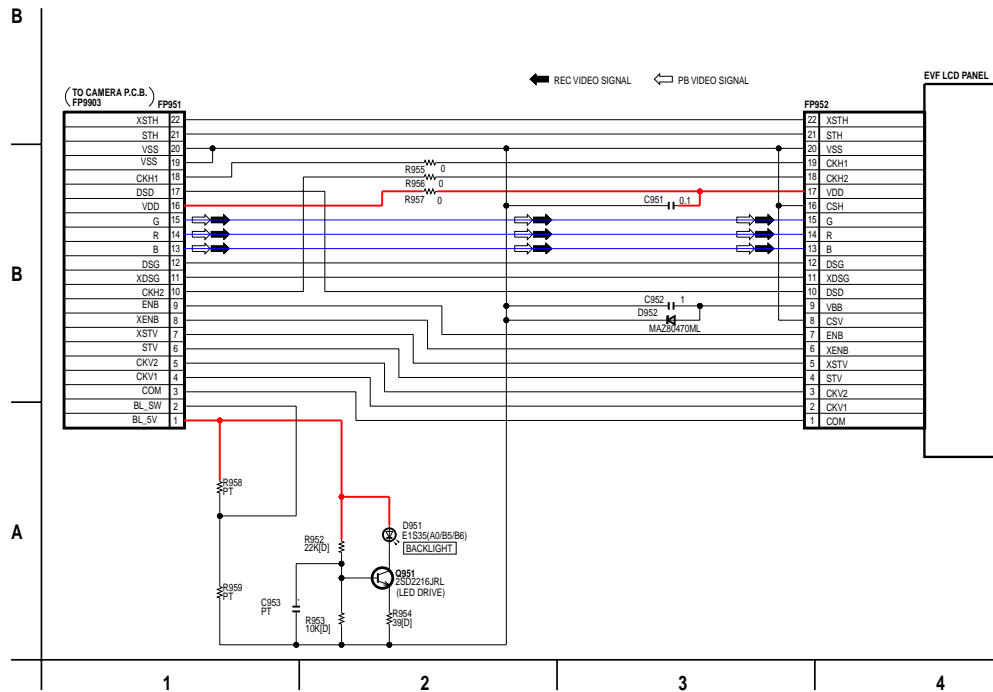
12.7. EVF BACKLIGHT / CASSETTE COVER / BATTERY CASE SCHEMATIC DIAGR

NOTE: For placing a purchase
be sure to use the part
Do not use the part nu

EVF BACKLIGHT SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

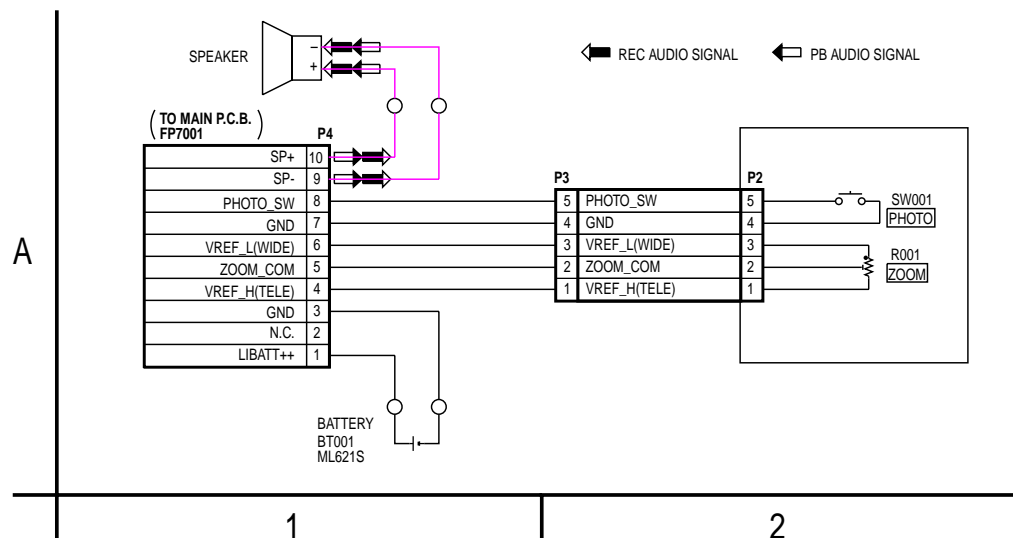
NOTE:
EVF BACKLIGHT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



CASSETTE COVER SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

NOTE:
CASSETTE COVER UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

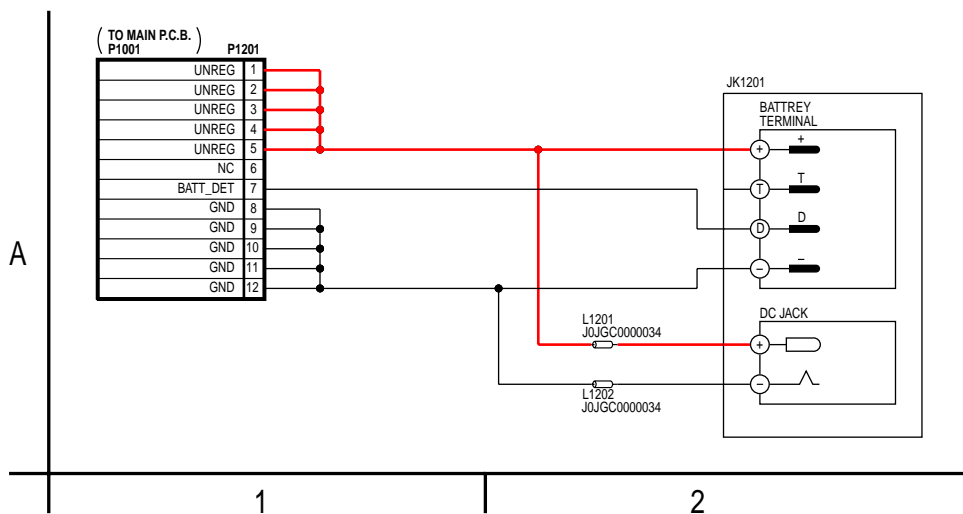
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

BATTERY CASE SCHEMATIC DIAGRAM

"FOR REFERENCE ONLY"

NOTE:
BATTERY CASE UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



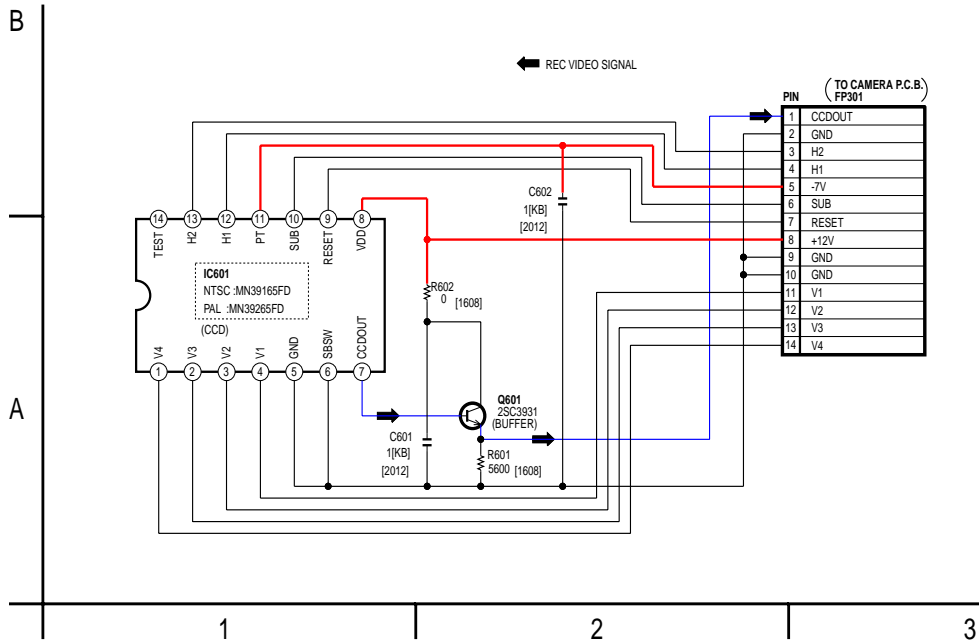
12.8. CCD / REAR / LCD SW SCHEMATIC DIAGRAMS



NOTE: For placing a purchase
be sure to use the part
Do not use the part nu

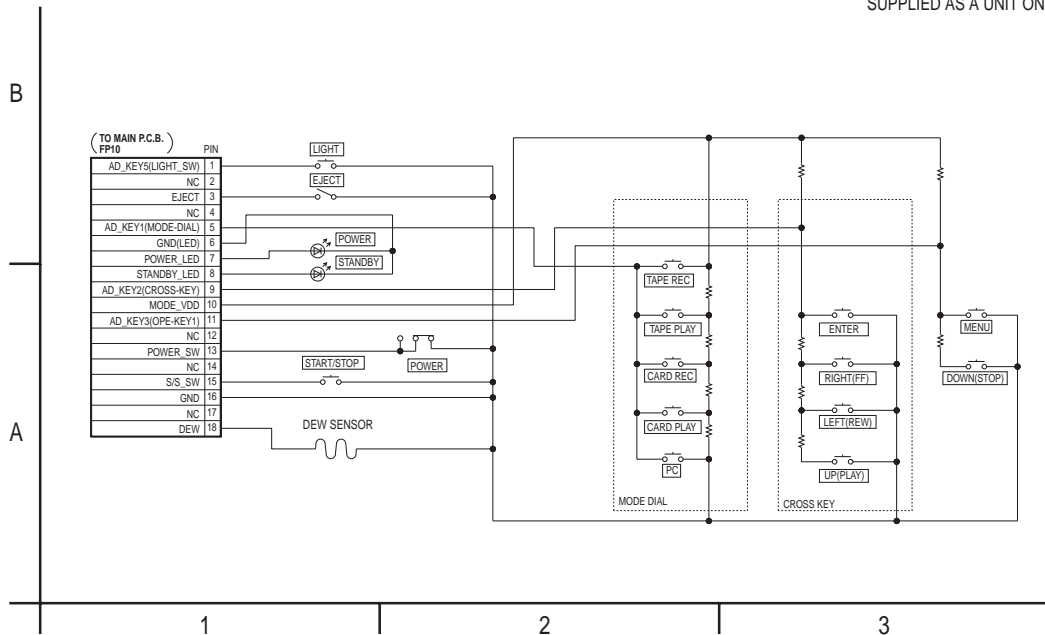
CCD SCHEMATIC DIAGRAM "FOR REFERENCE ONLY"

NOTE:
CCD P.C.B. IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



REAR SCHEMATIC DIAGRAM "FOR REFERENCE ONLY"

NOTE:
REAR UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



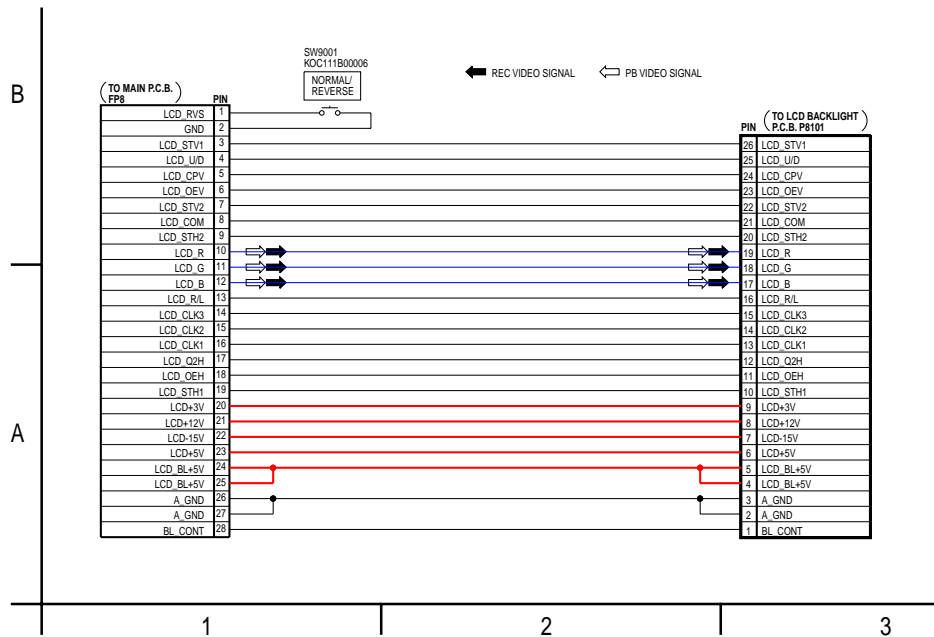
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

LCD SW SCHEMATIC DIAGRAM "FOR REFERENCE ONLY"

NOTE:
LCD SW IS NOT SERVICEABLE AND IS
SUPPLIED AS A R SHAFT CASE UNIT ONLY FOR REPLACEMENT.

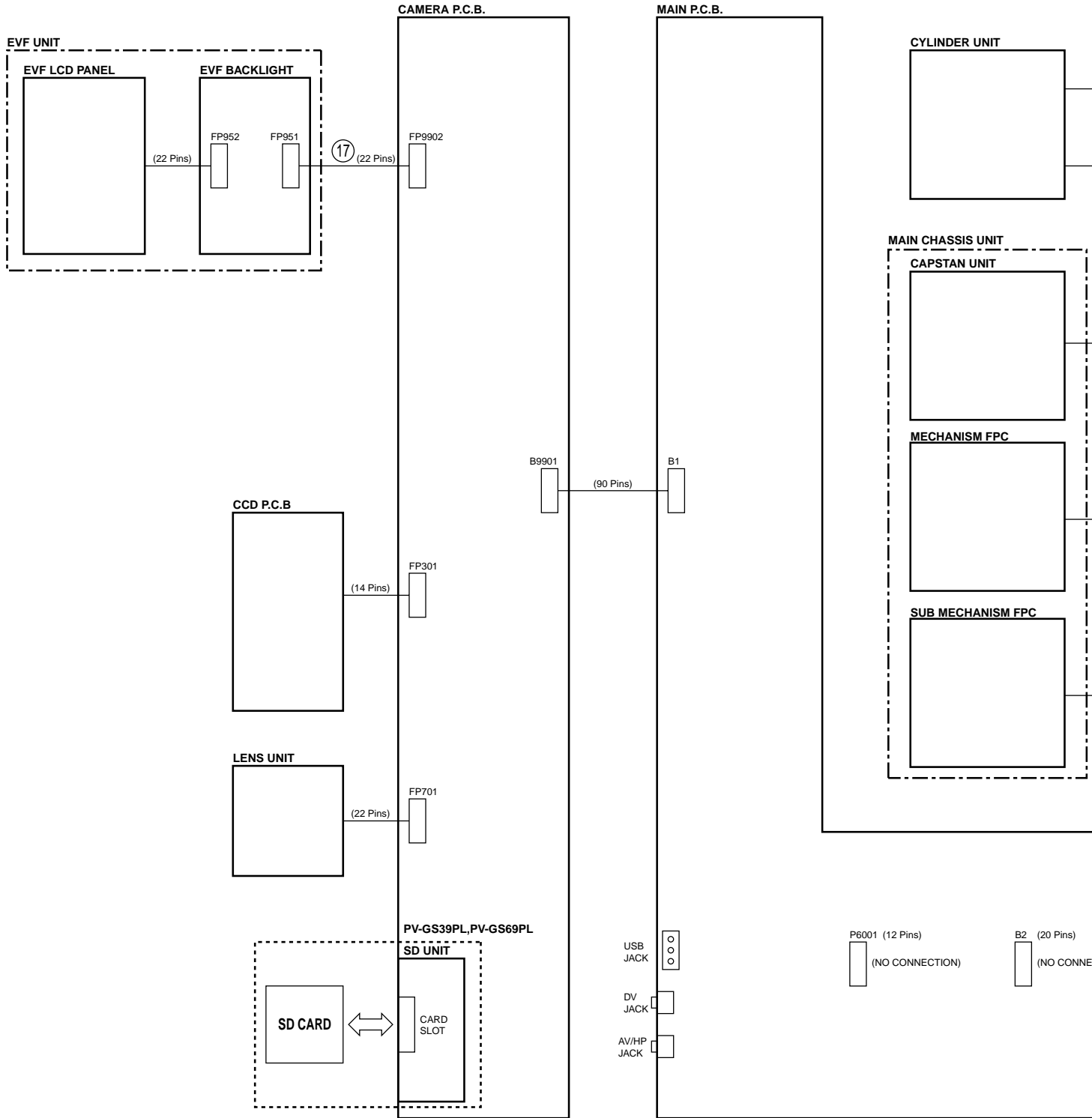


12.9. INTERCONNECTION SCHEMATIC DIAGRAM



INTERCONNECTION SCHEMATIC DIAGRAM

NOTE: For placing a purchase
be sure to use the part
Do not use the part nu

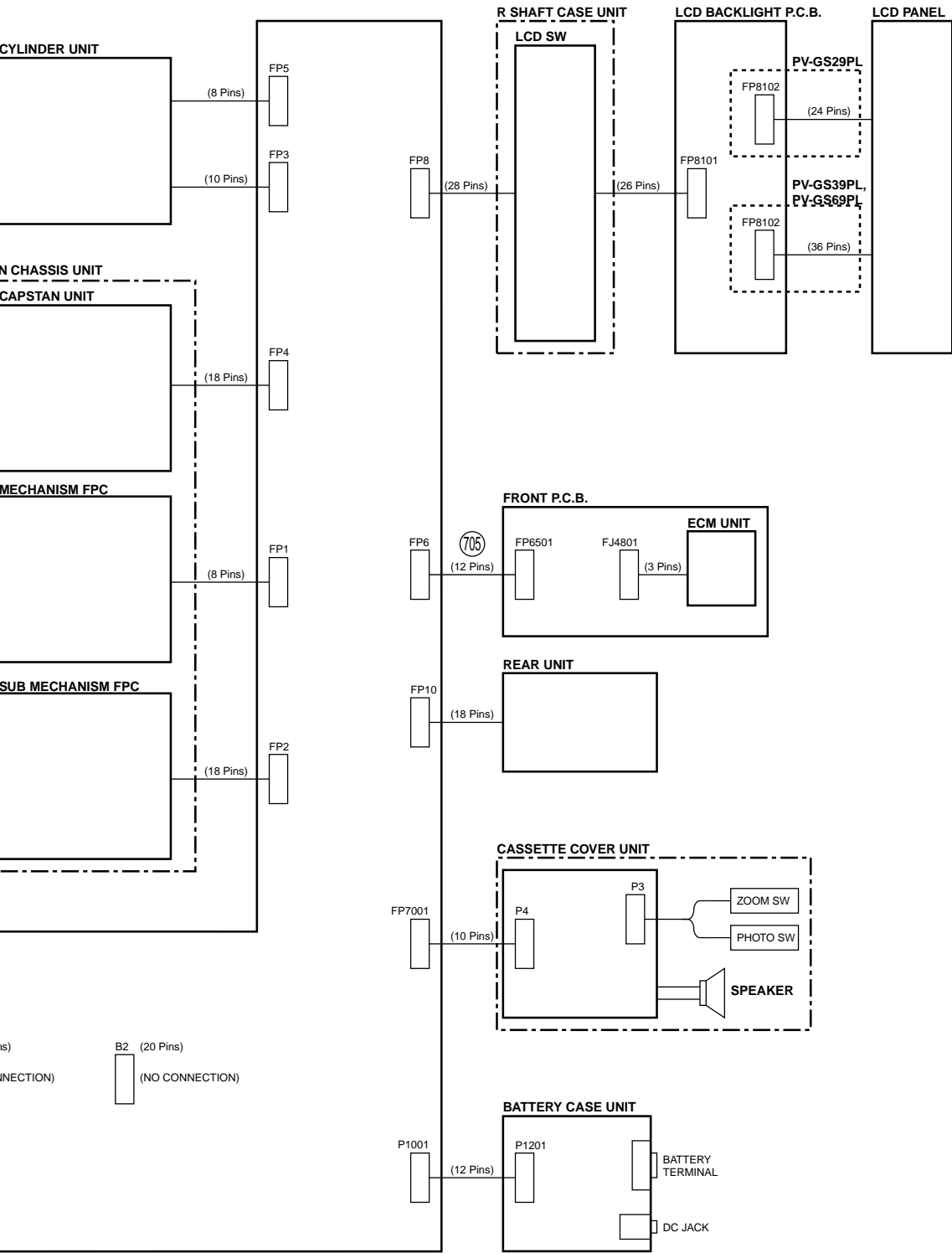




NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



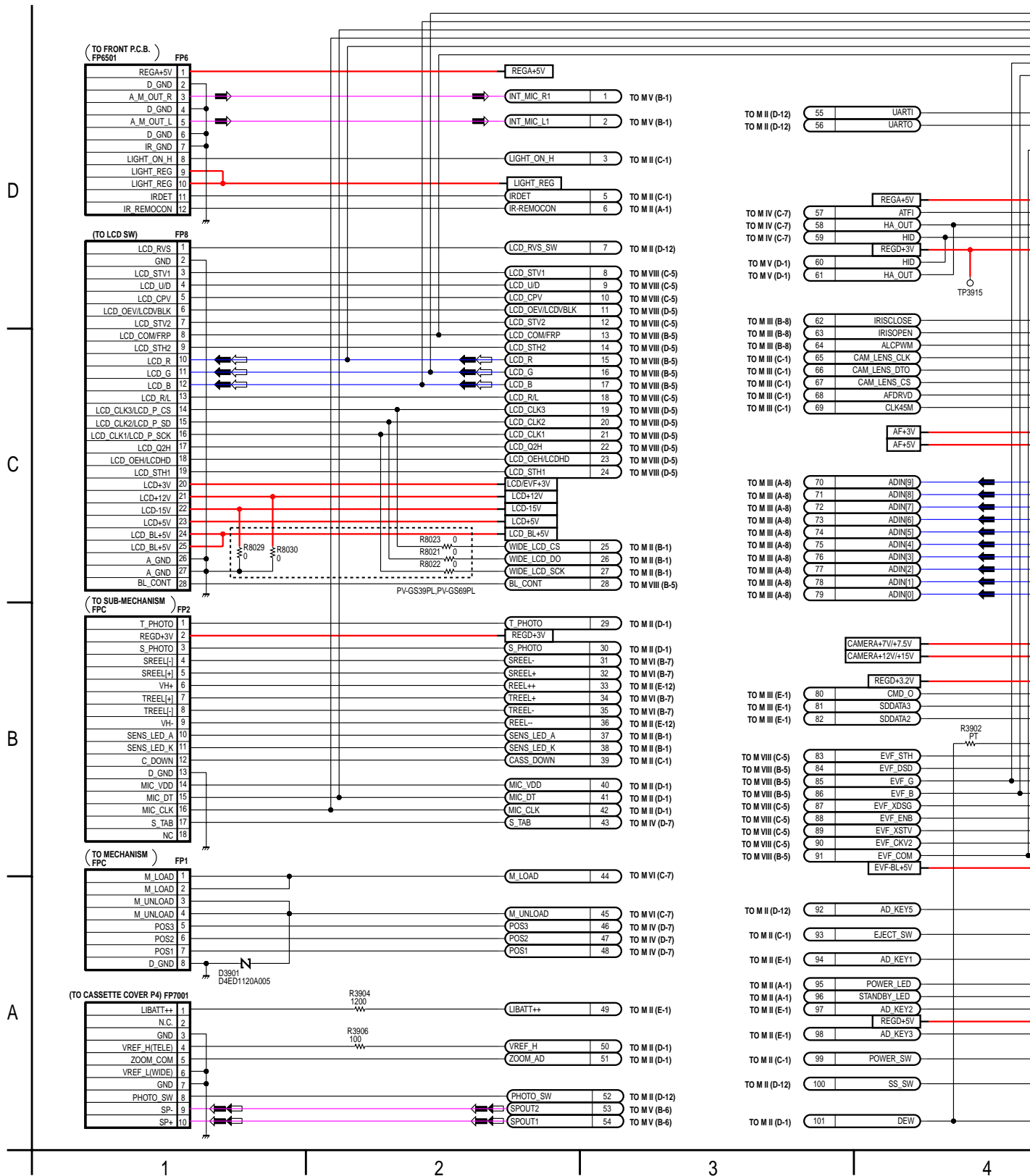
INTERCONNECTION SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL



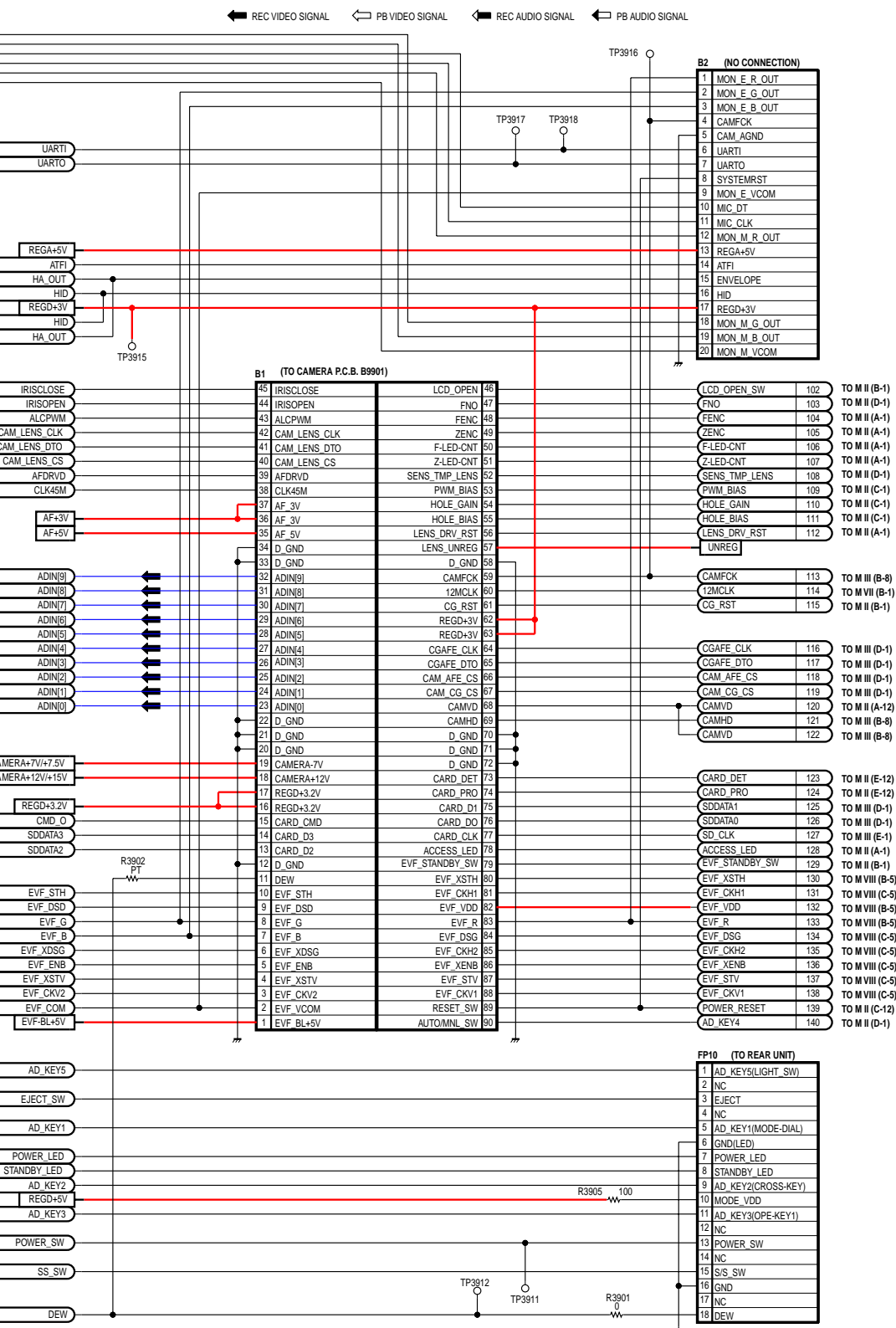
12.2. MAIN SCHEMATIC DIAGRAMS

MAIN I SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



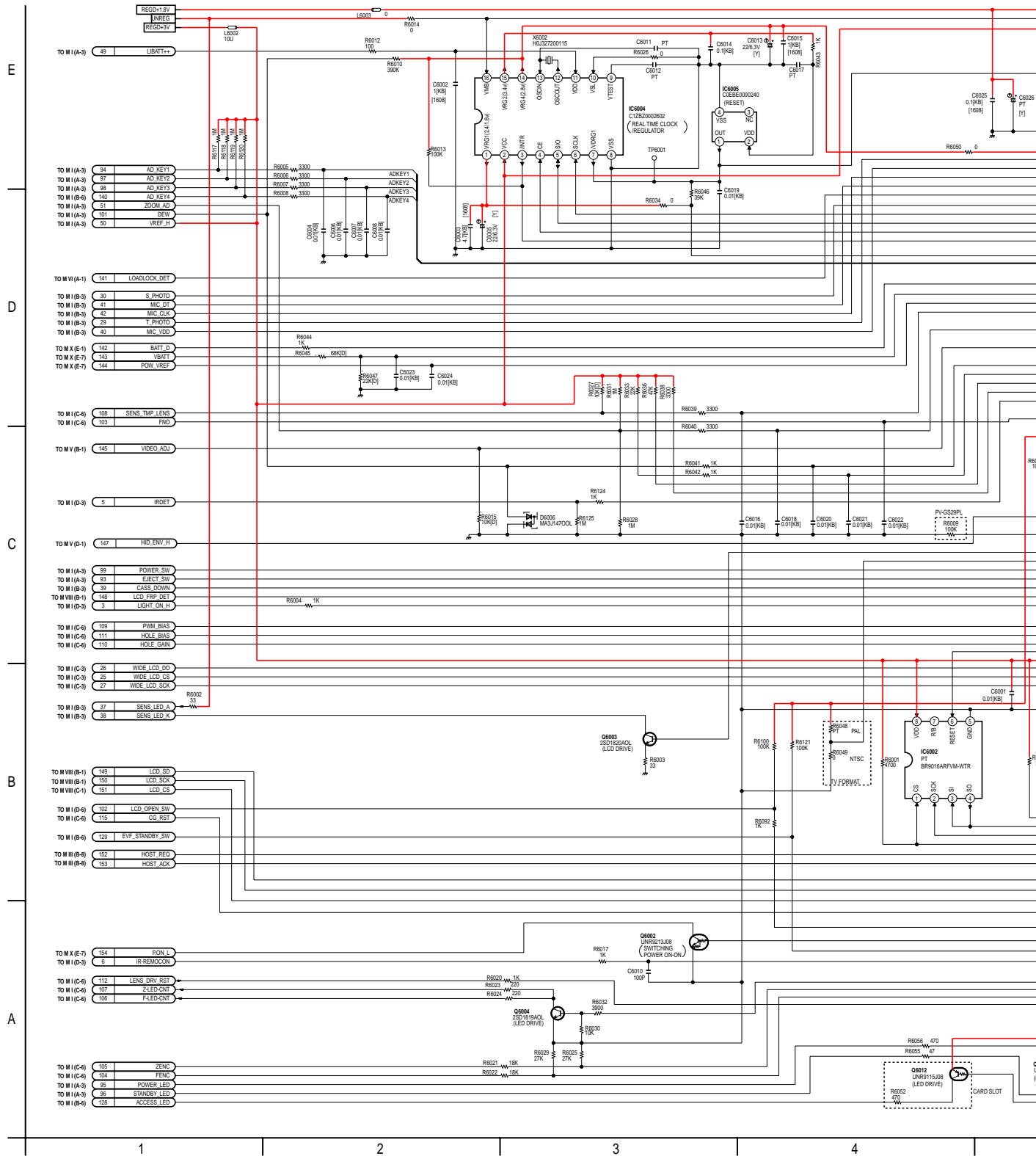
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART
LSJB8330
MAIN I SCHEMATIC DIAGRAM
29PL/PV-GS39PL/PV-GS69PL

MAIN II SCHEMATIC DIAGRAM (1/2)

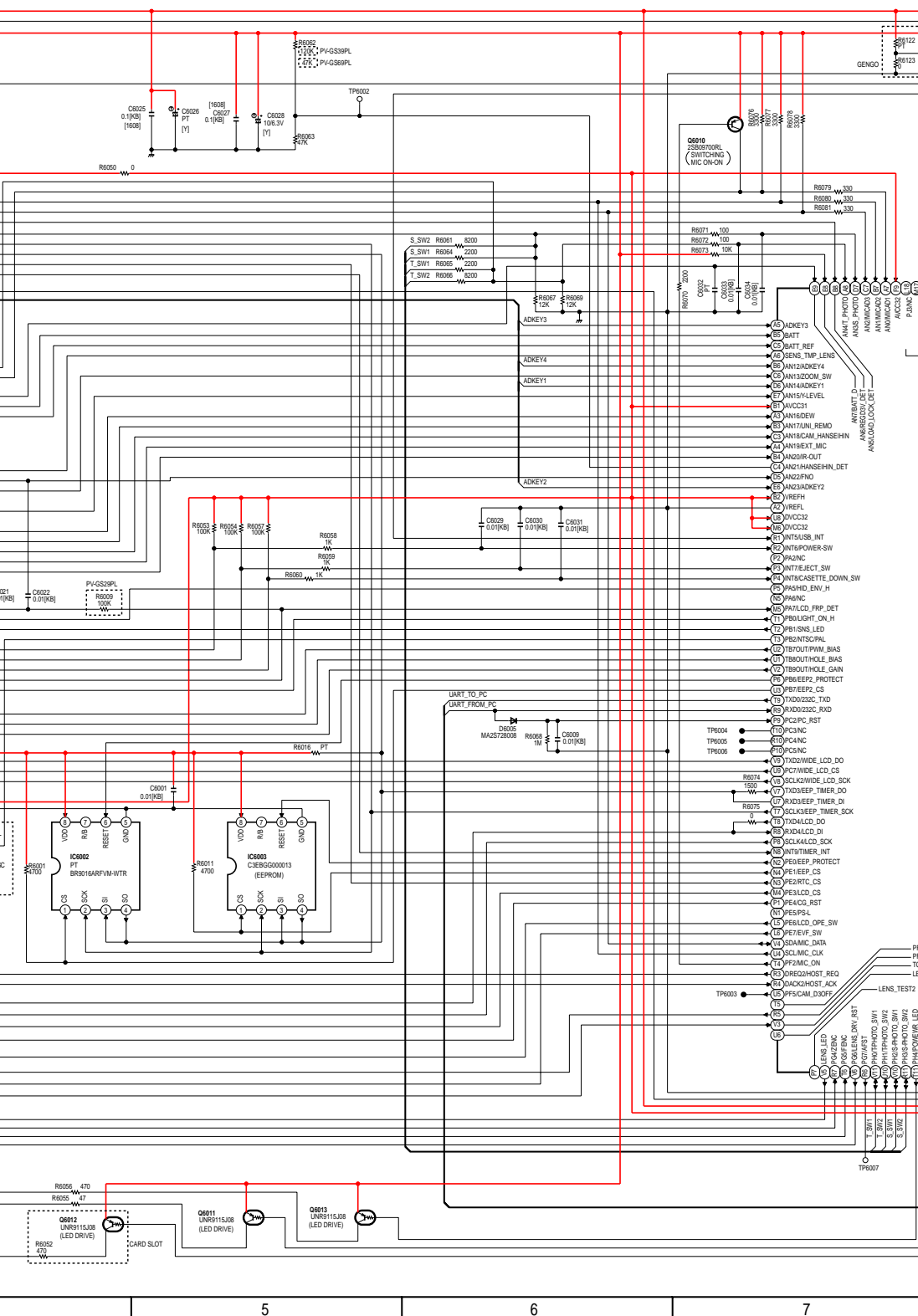
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



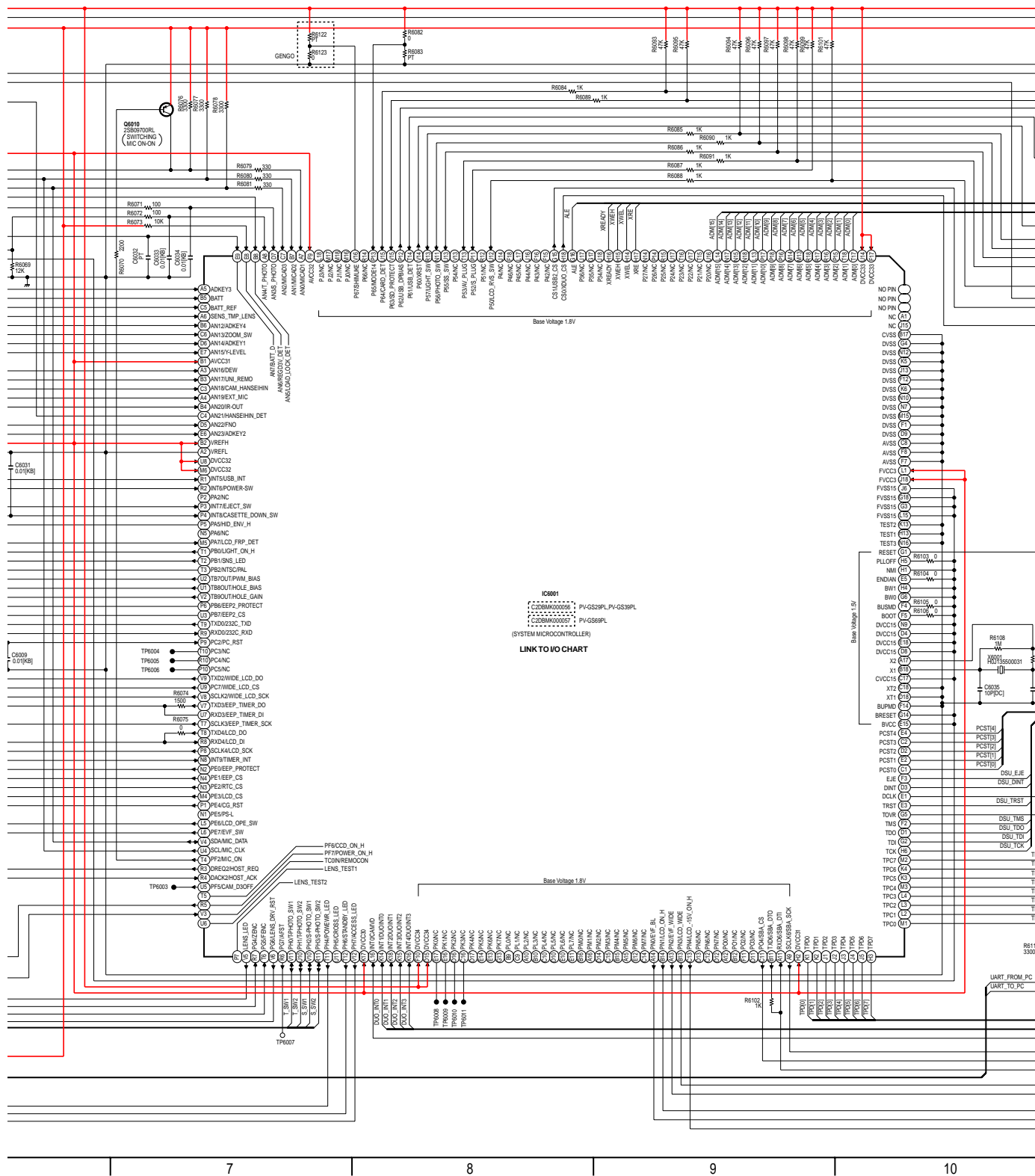
LINK TO VOLTAGE CHART

LSJB8330

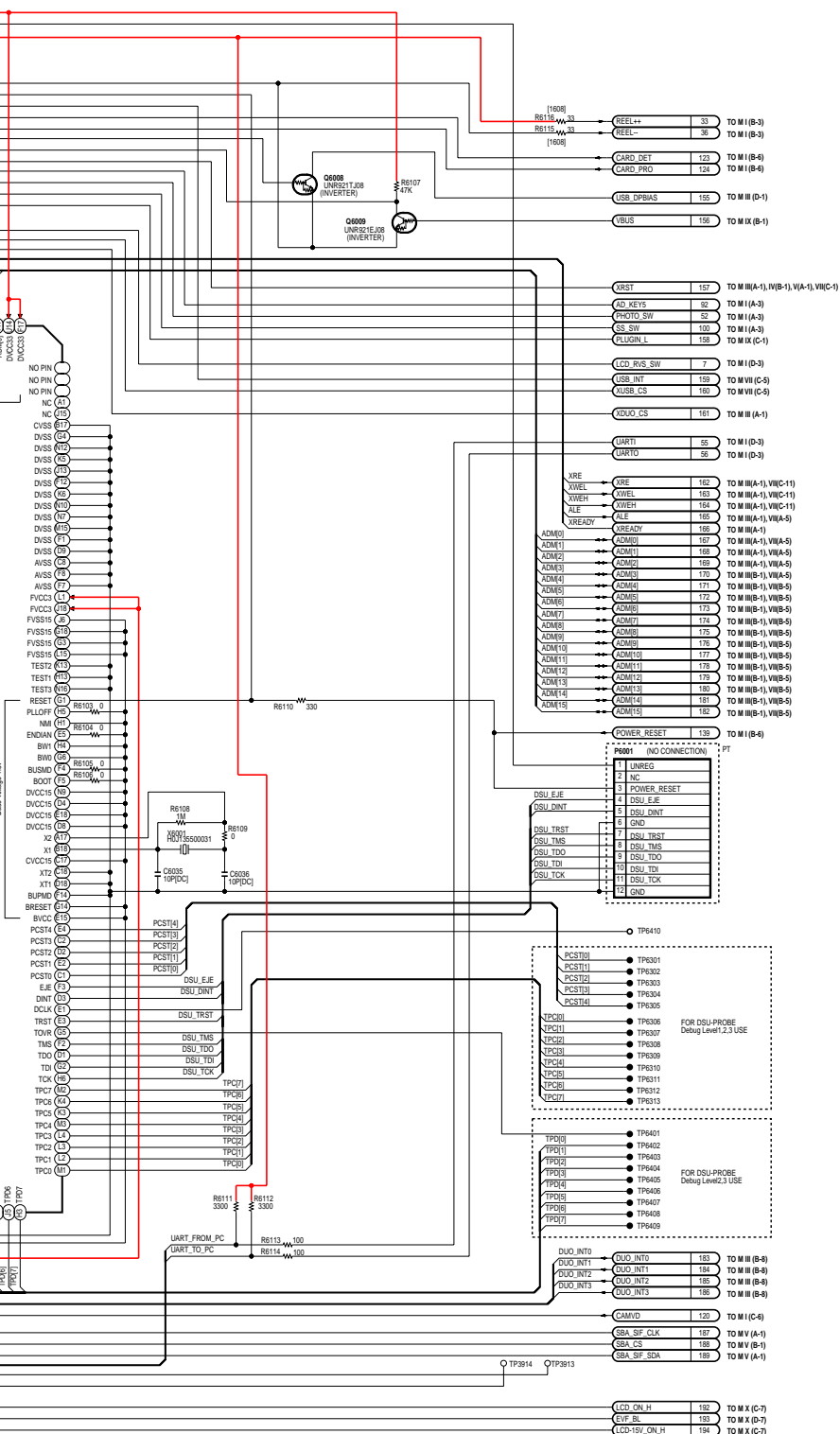
MAIN II SCHEMATIC DIAGRAM (1/2)
PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN II SCHEMATIC DIAGRAM (2/2)

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART

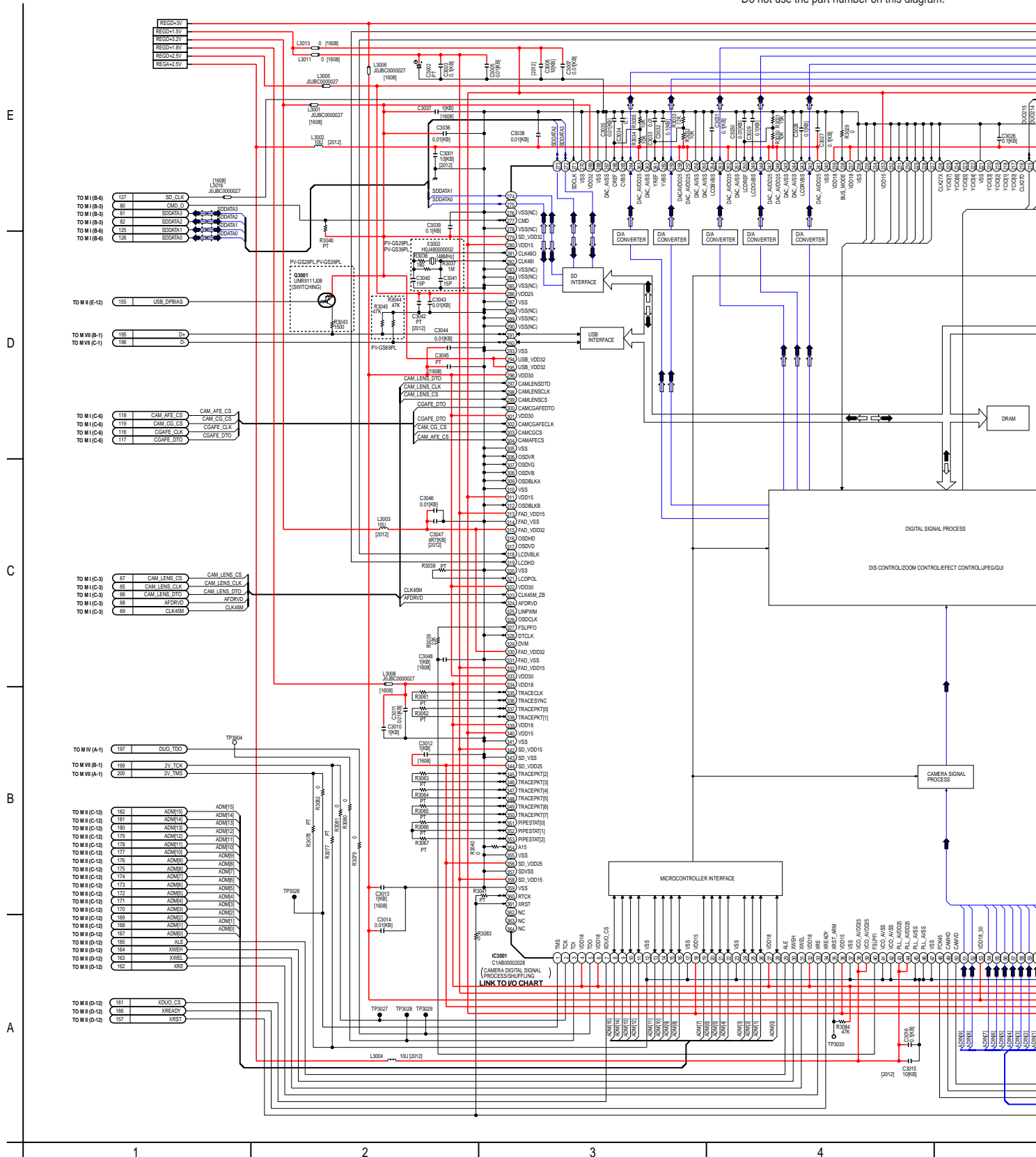
LSJB8330

MAIN II SCHEMATIC DIAGRAM (2/2)

PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN III SCHEMATIC DIAGRAM

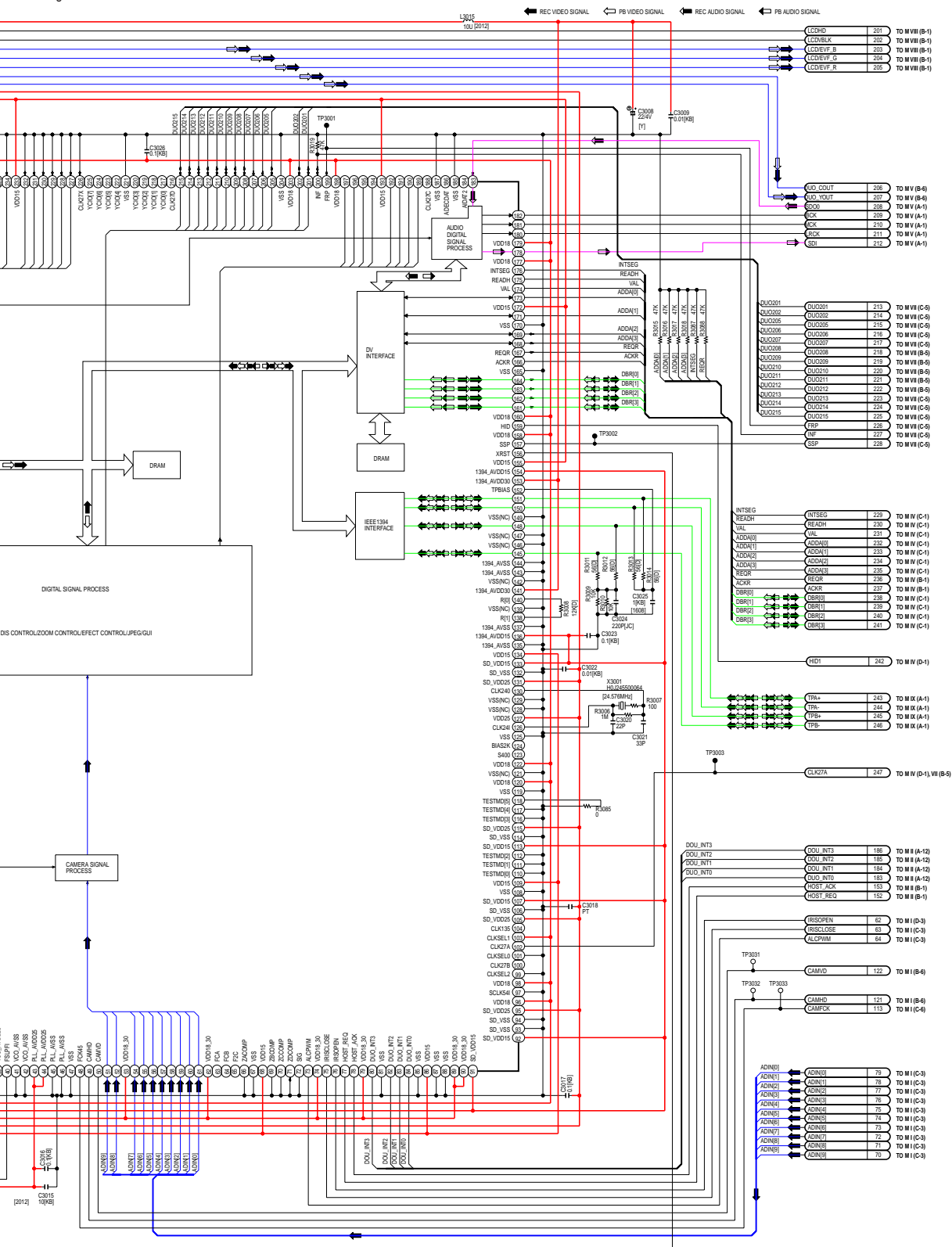
NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.



er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

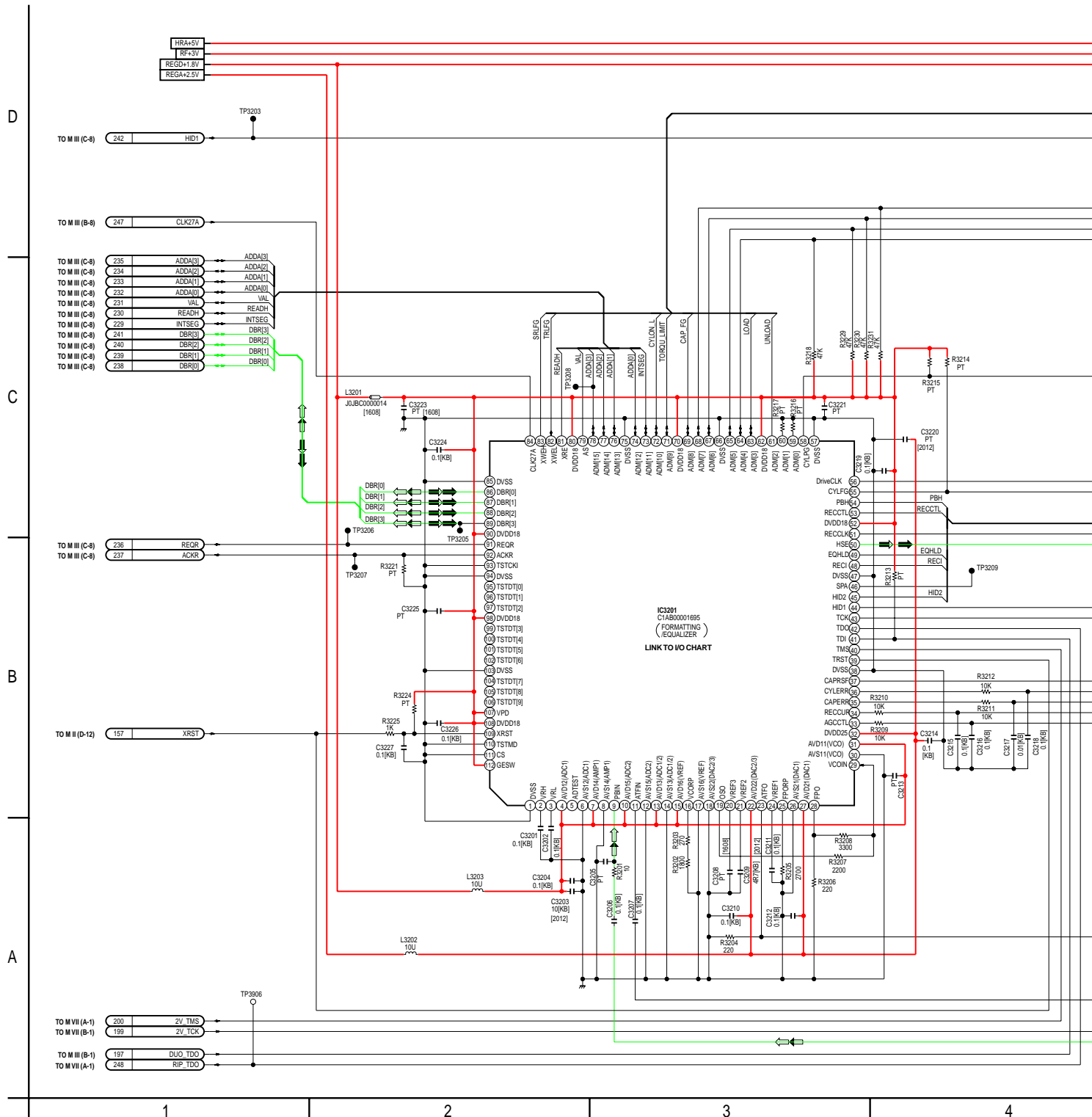


LINK TO VOLTAGE CHART

LSJB8330
MAIN III SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN IV SCHEMATIC DIAGRAM

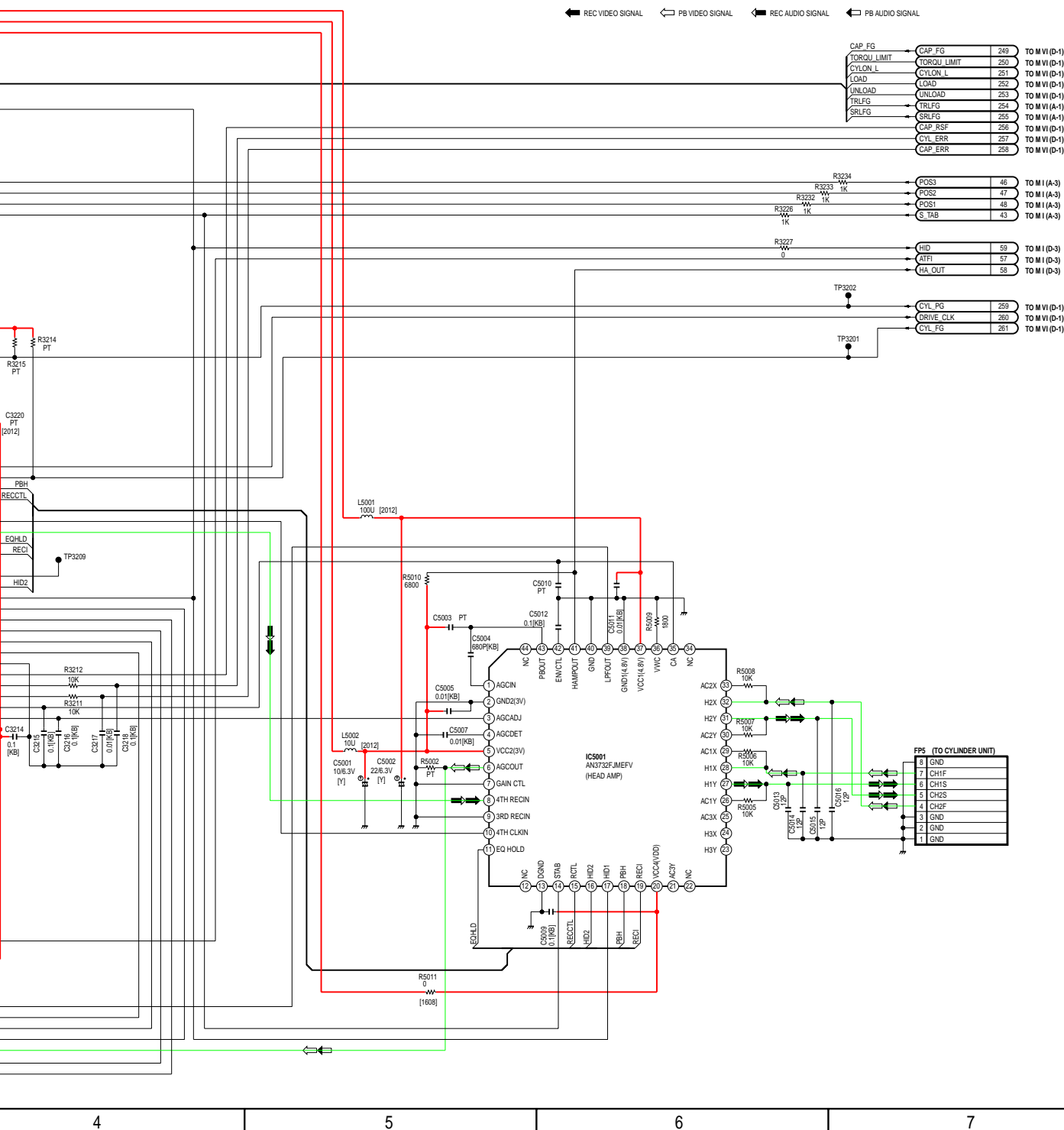
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.



er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART
LSJB8330
MAIN IV SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

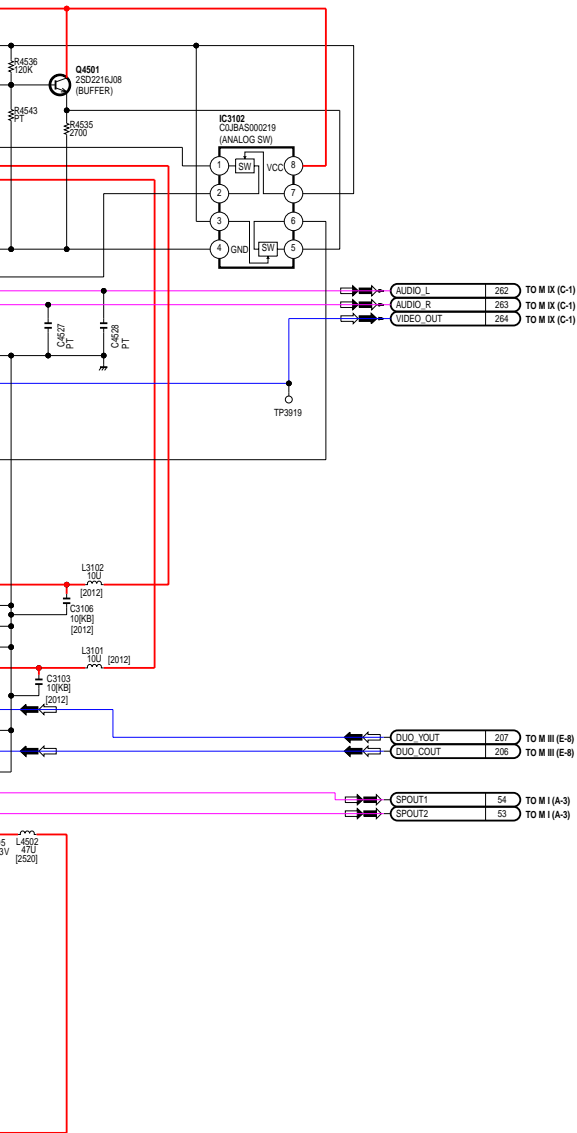


er of the parts,
ber listed in the parts list.
on this diagram.

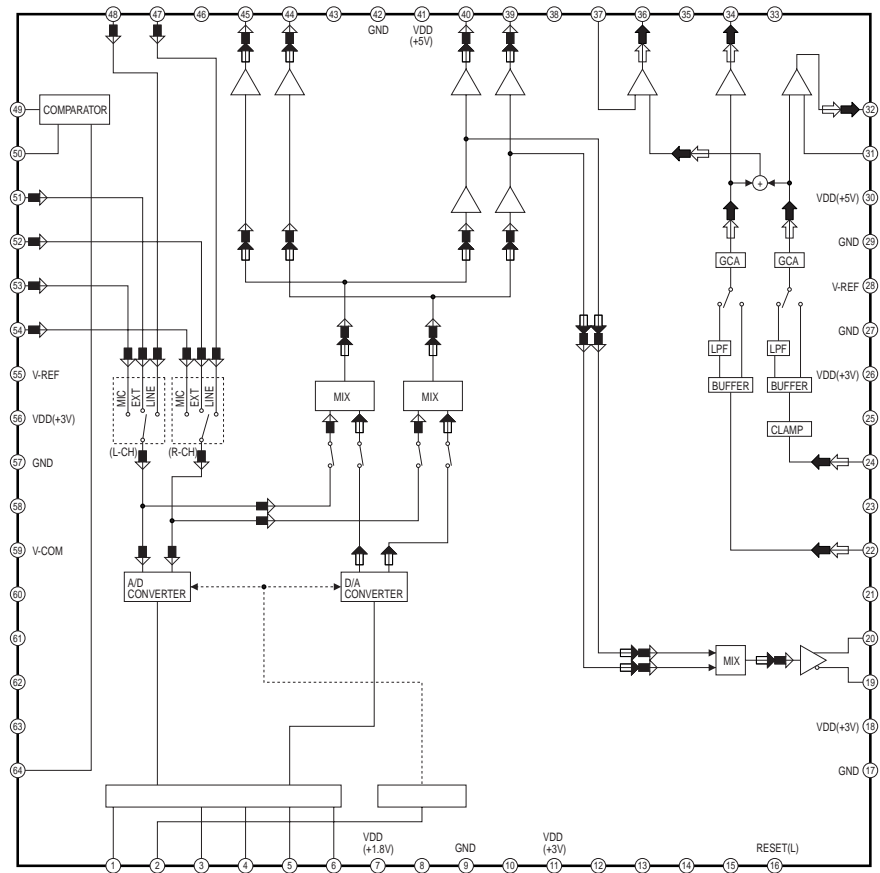
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

← REC VIDEO SIGNAL ← PB VIDEO SIGNAL ← REC AUDIO SIGNAL ← PB AUDIO SIGNAL



IC3101 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

LSJB8330

MAIN V SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

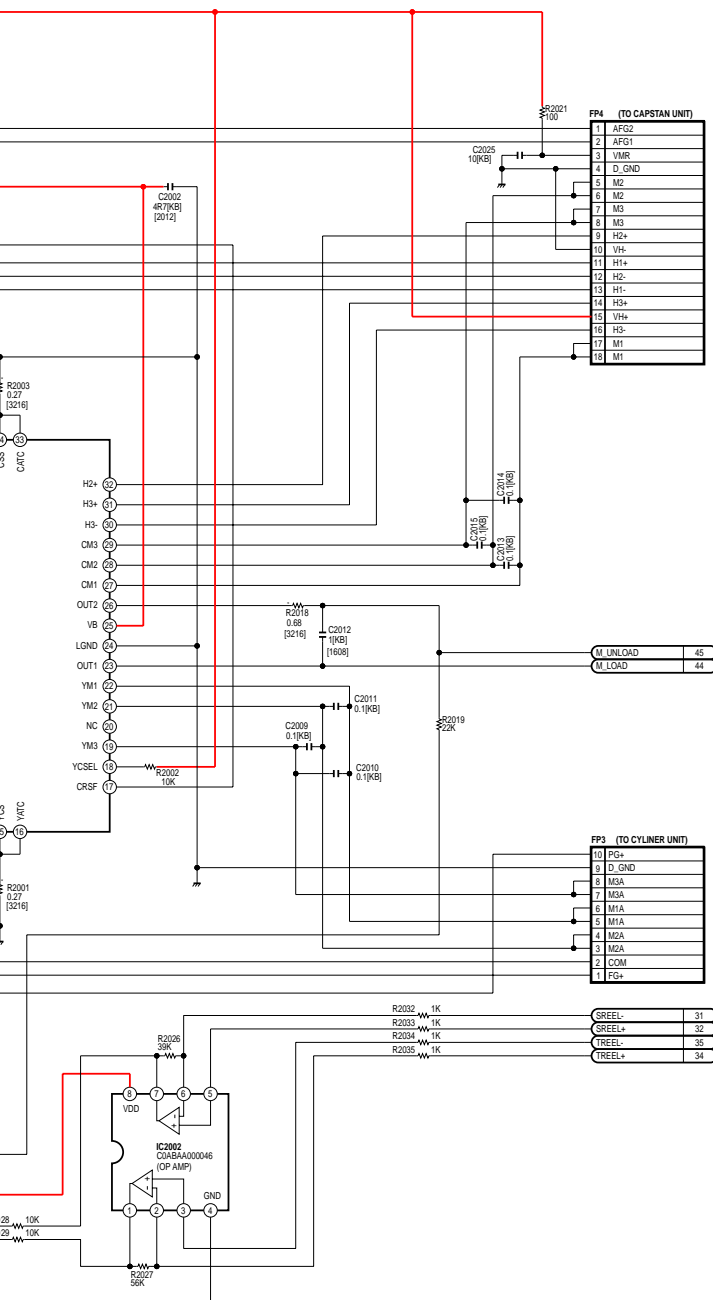
101



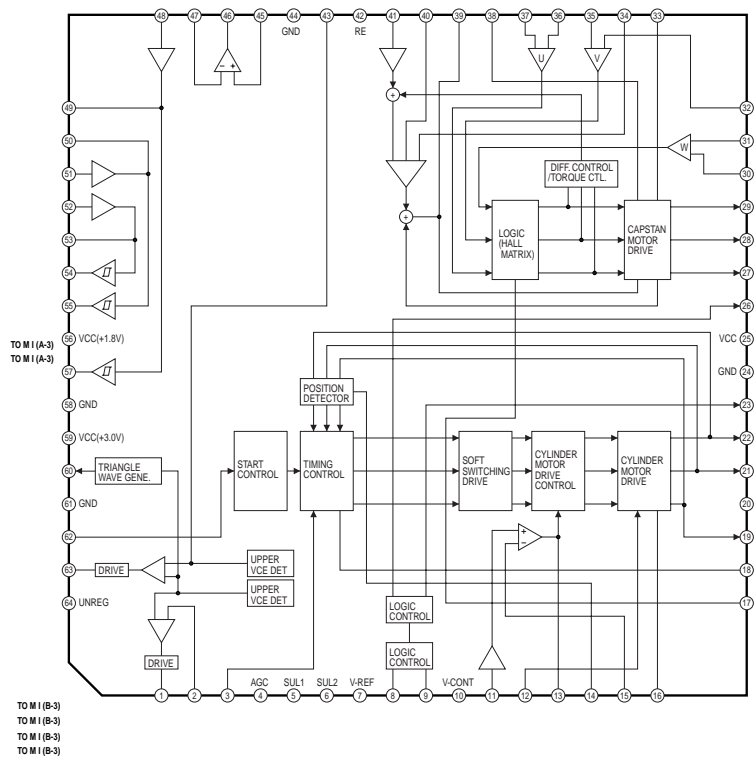
er of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



IC2001 IC- DETAIL BLOCK DIAGRAM



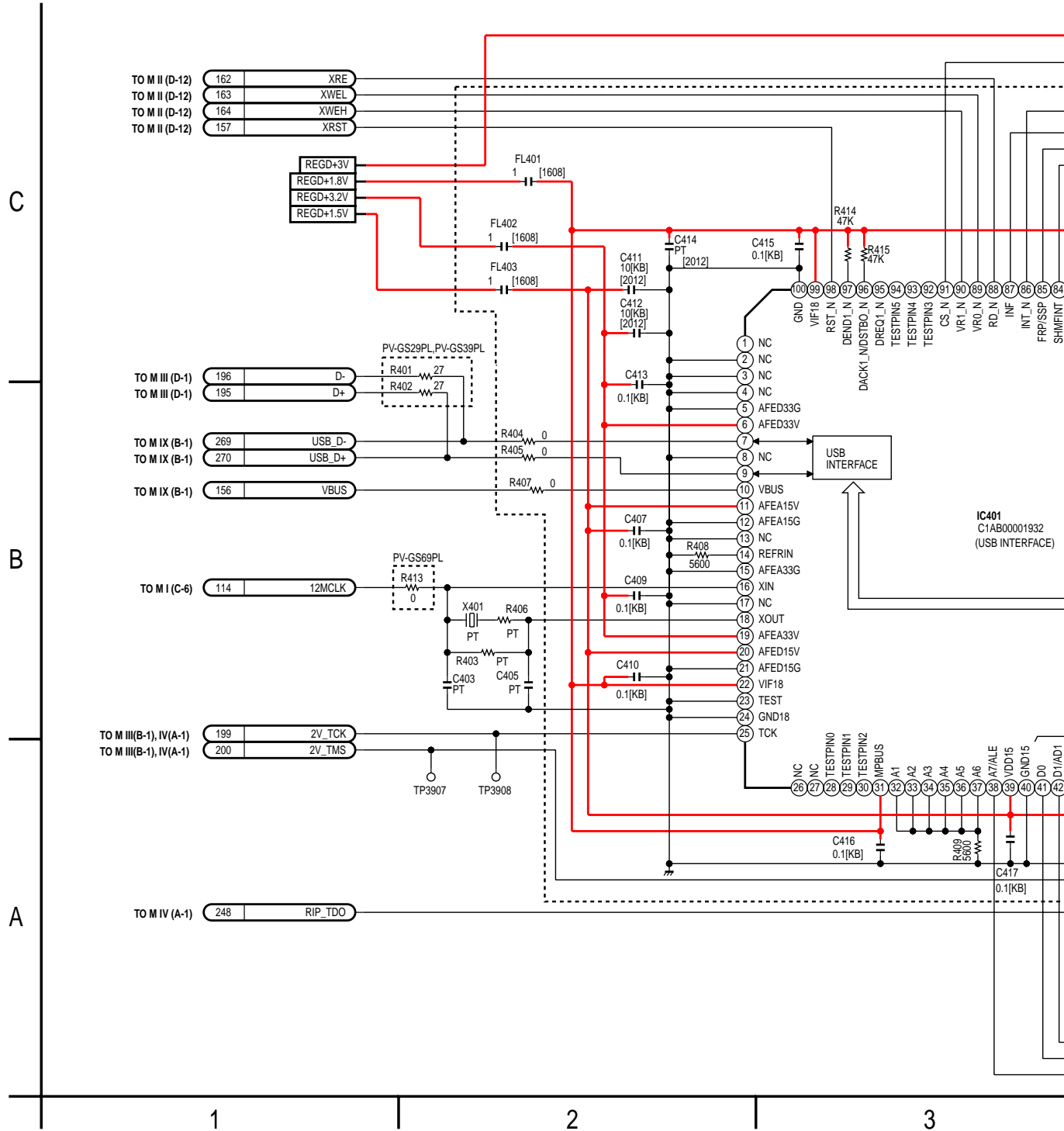
LINK TO VOLTAGE CHART

LSJB8330

MAIN VI SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN VII SCHEMATIC DIAGRAM

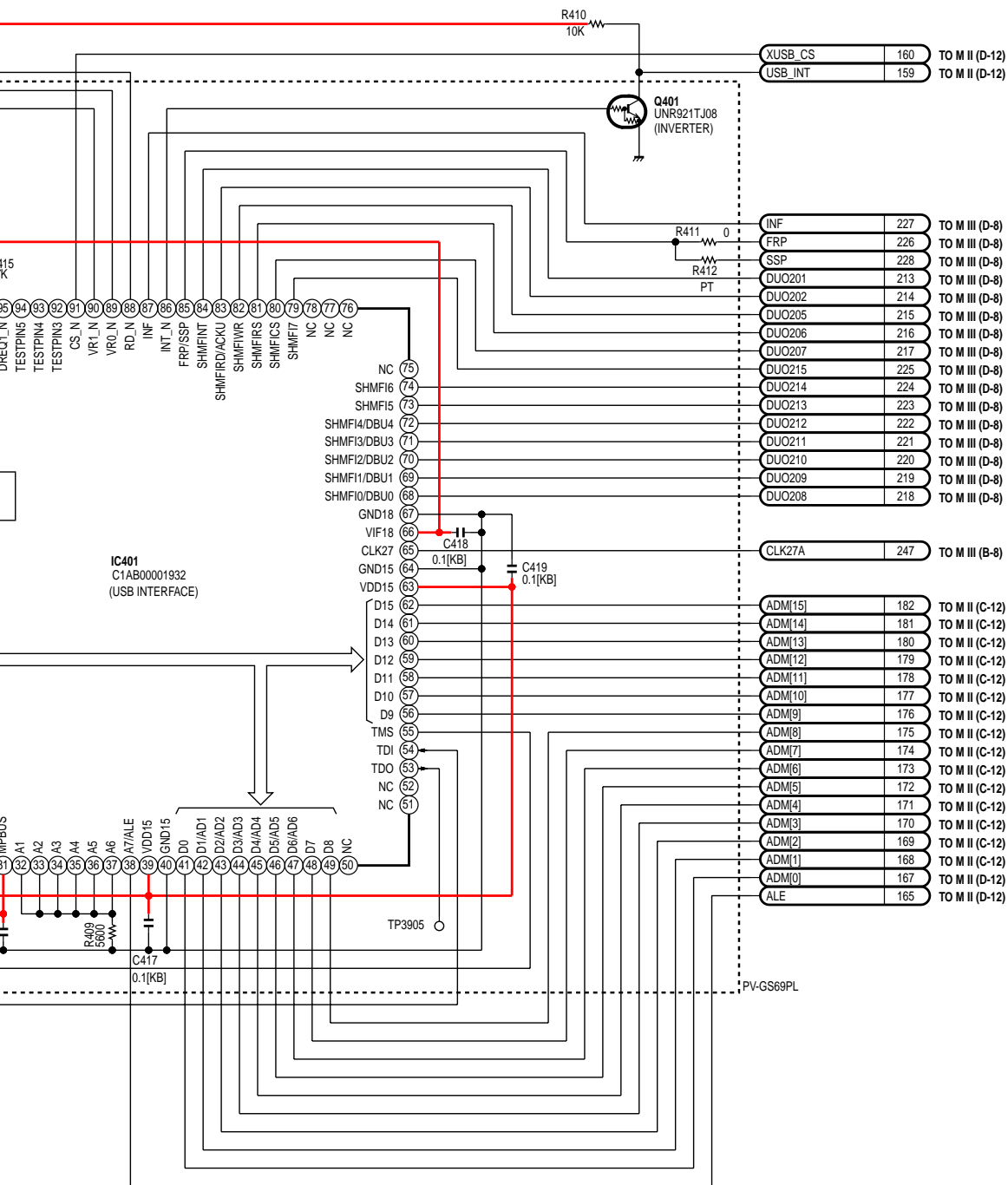
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.



of the parts,
ber listed in the parts list.
on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



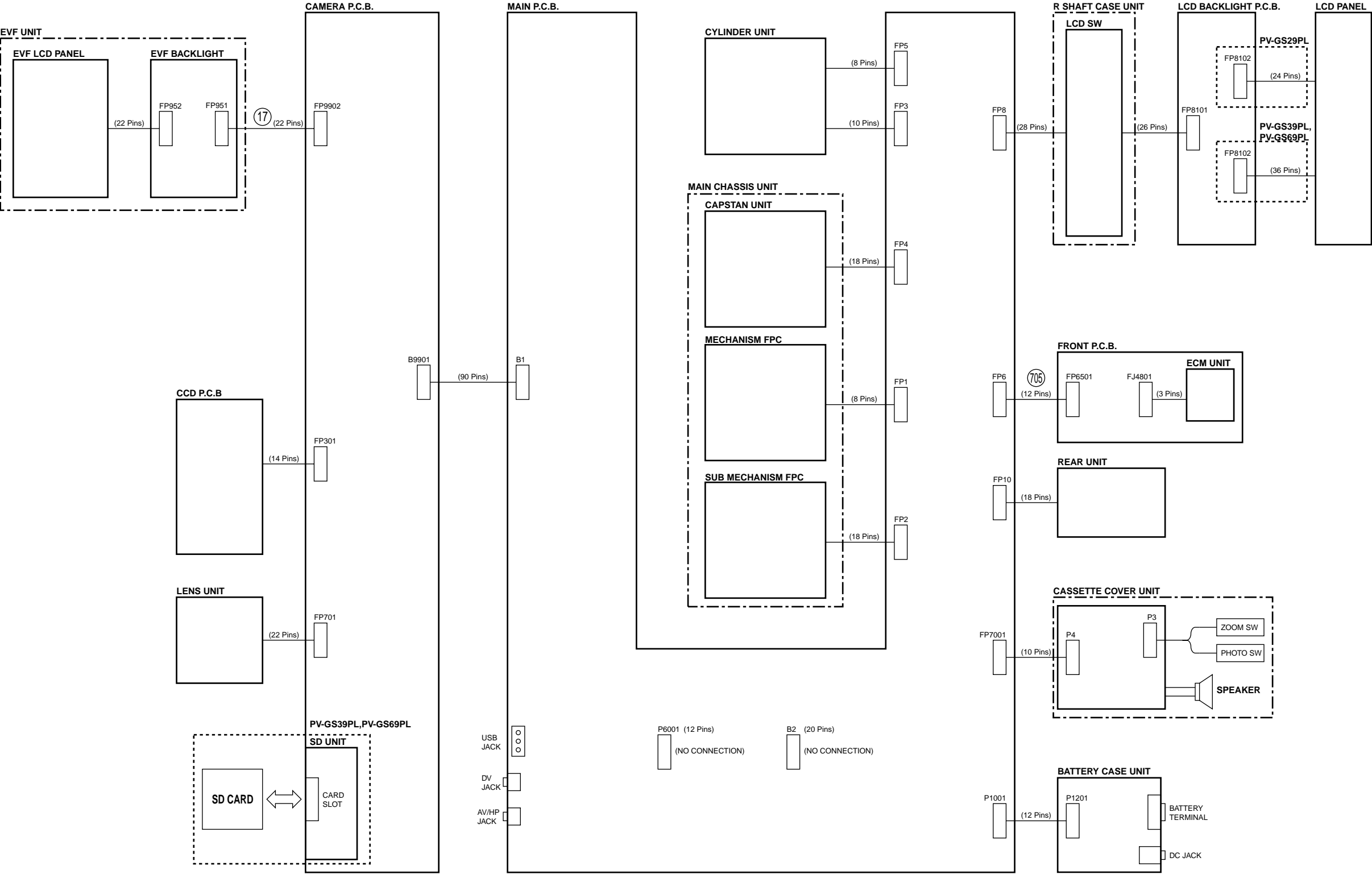
LINK TO VOLTAGE CHART
LSJB8330
MAIN VII SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

INTERCONNECTION SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



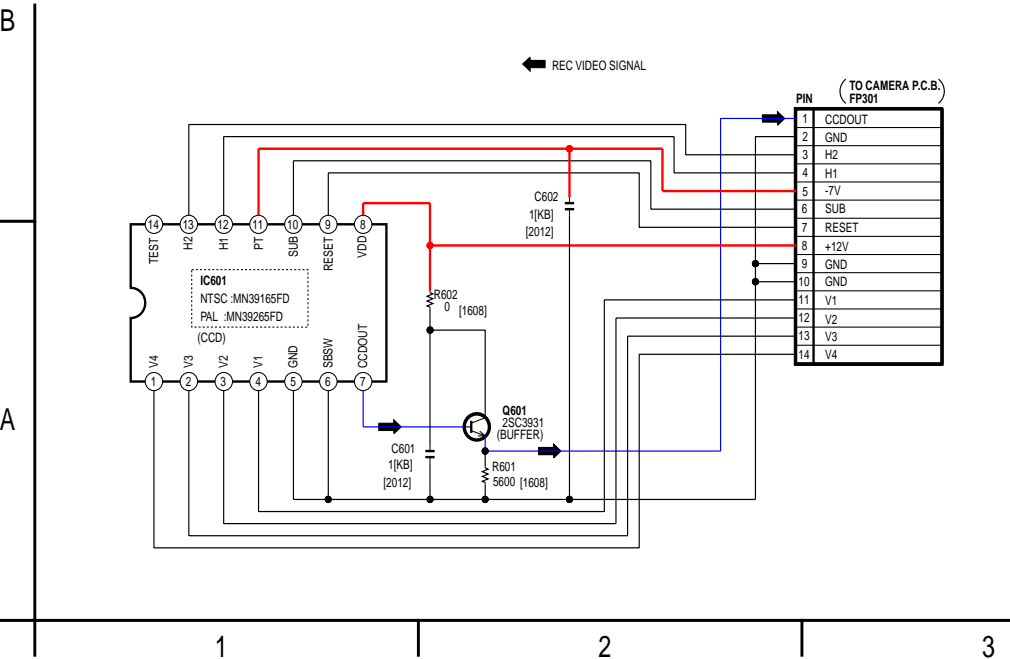
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

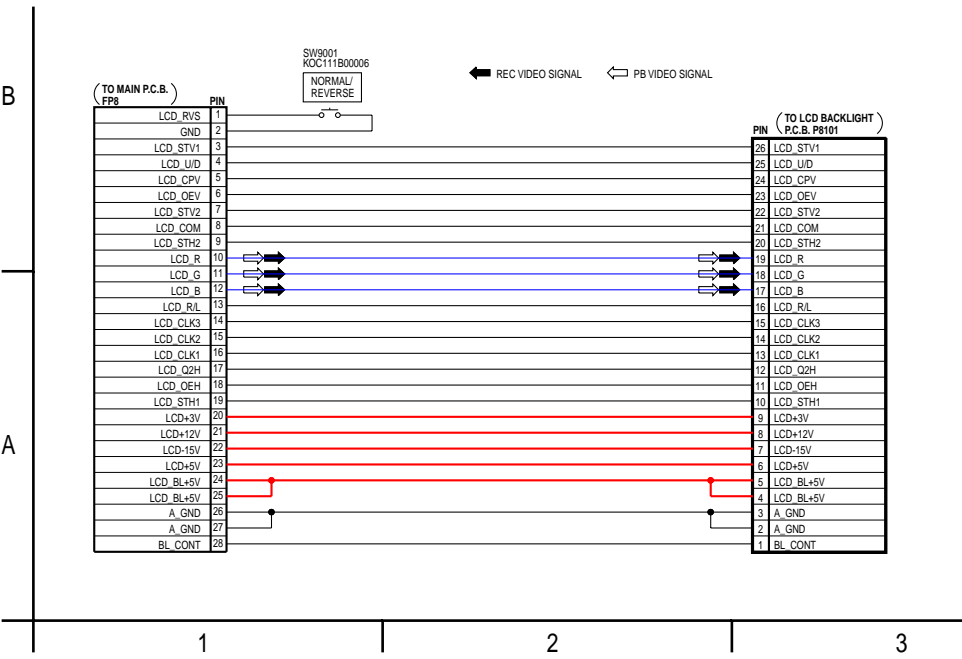
CCD SCHEMATIC DIAGRAM
“FOR REFERENCE ONLY”

NOTE:
CCD P.C.B. IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



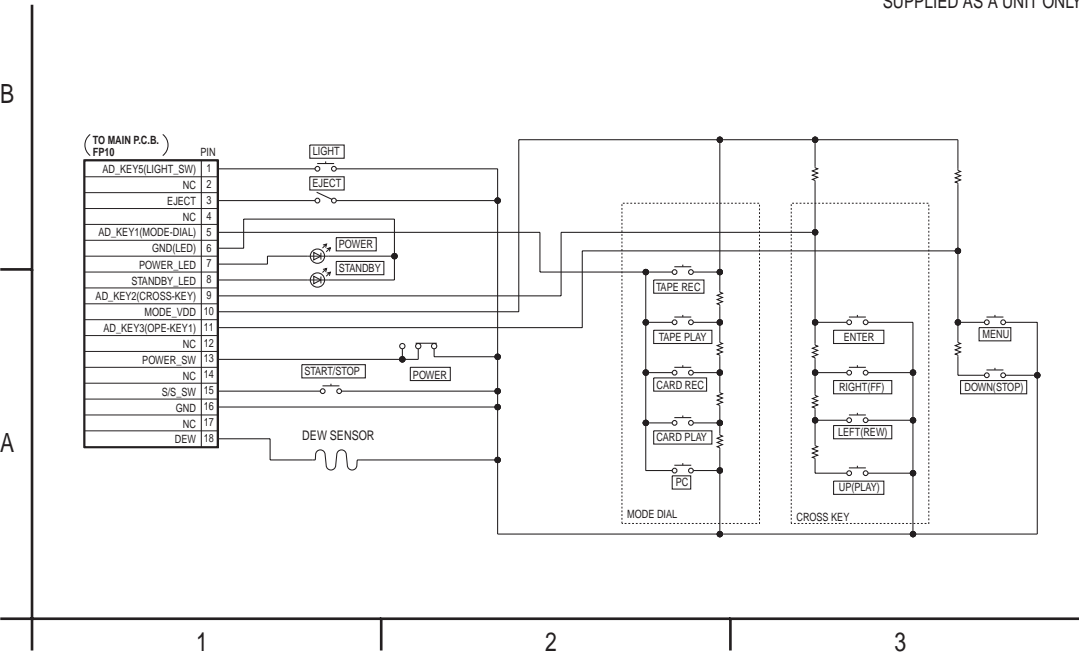
LCD SW SCHEMATIC DIAGRAM
“FOR REFERENCE ONLY”

NOTE:
LCD SW IS NOT SERVICEABLE AND IS
SUPPLIED AS A R SHAFT CASE UNIT ONLY FOR REPLACEMENT.



REAR SCHEMATIC DIAGRAM
“FOR REFERENCE ONLY”

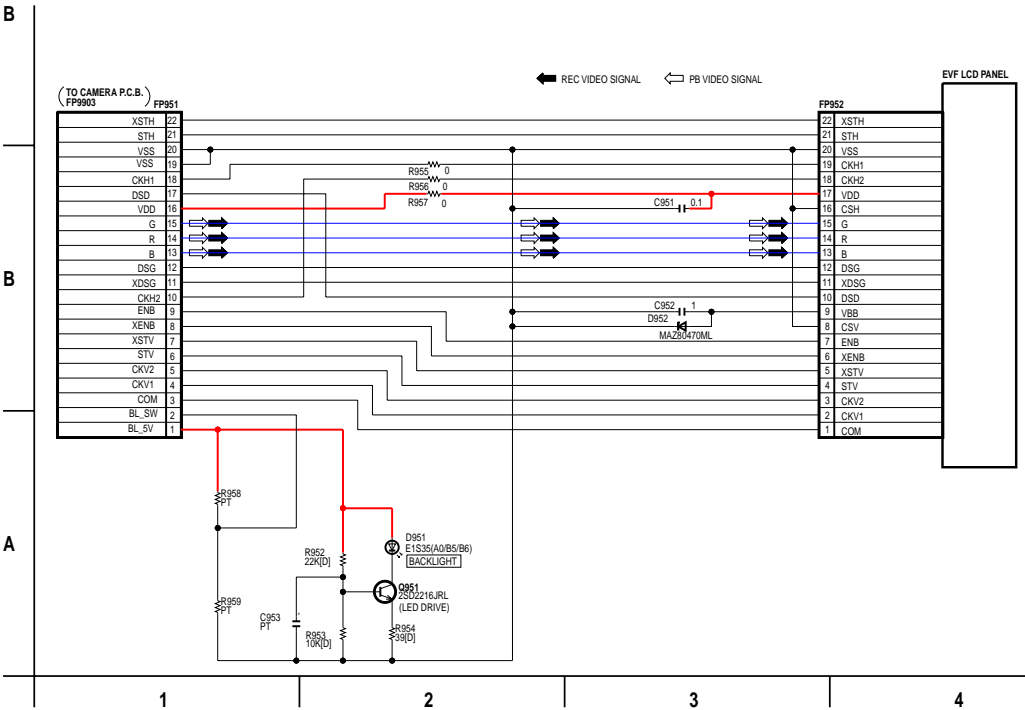
NOTE:
REAR UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



EVF BACKLIGHT SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

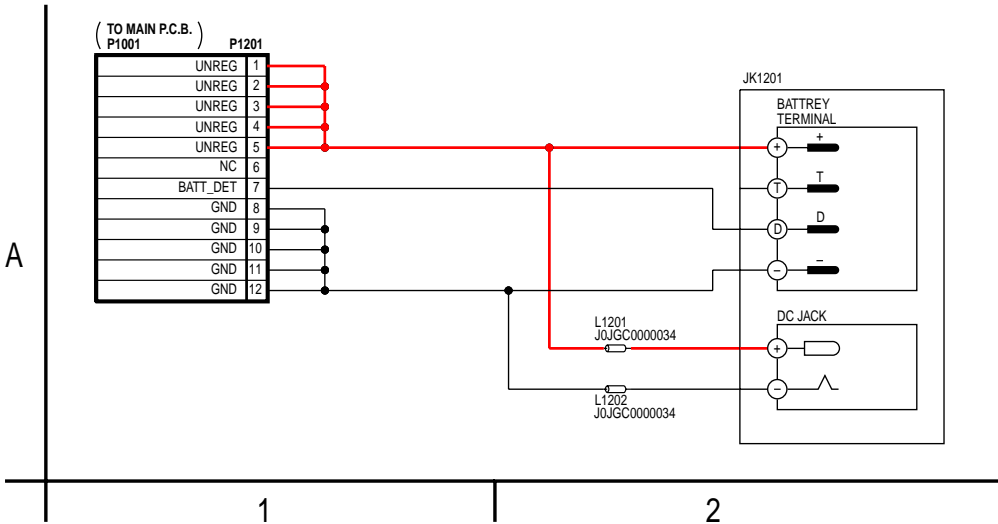
NOTE:
EVF BACKLIGHT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



BATTERY CASE SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

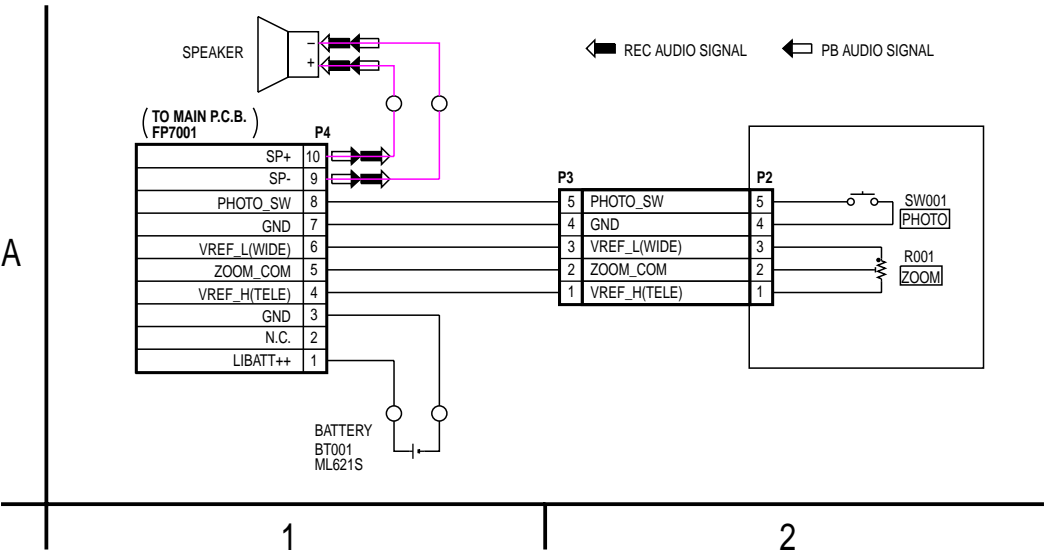
NOTE:
BATTERY CASE UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



CASSETTE COVER SCHEMATIC DIAGRAM

“FOR REFERENCE ONLY”

NOTE:
CASSETTE COVER UNIT IS NOT SERVICEABLE AND IS
SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



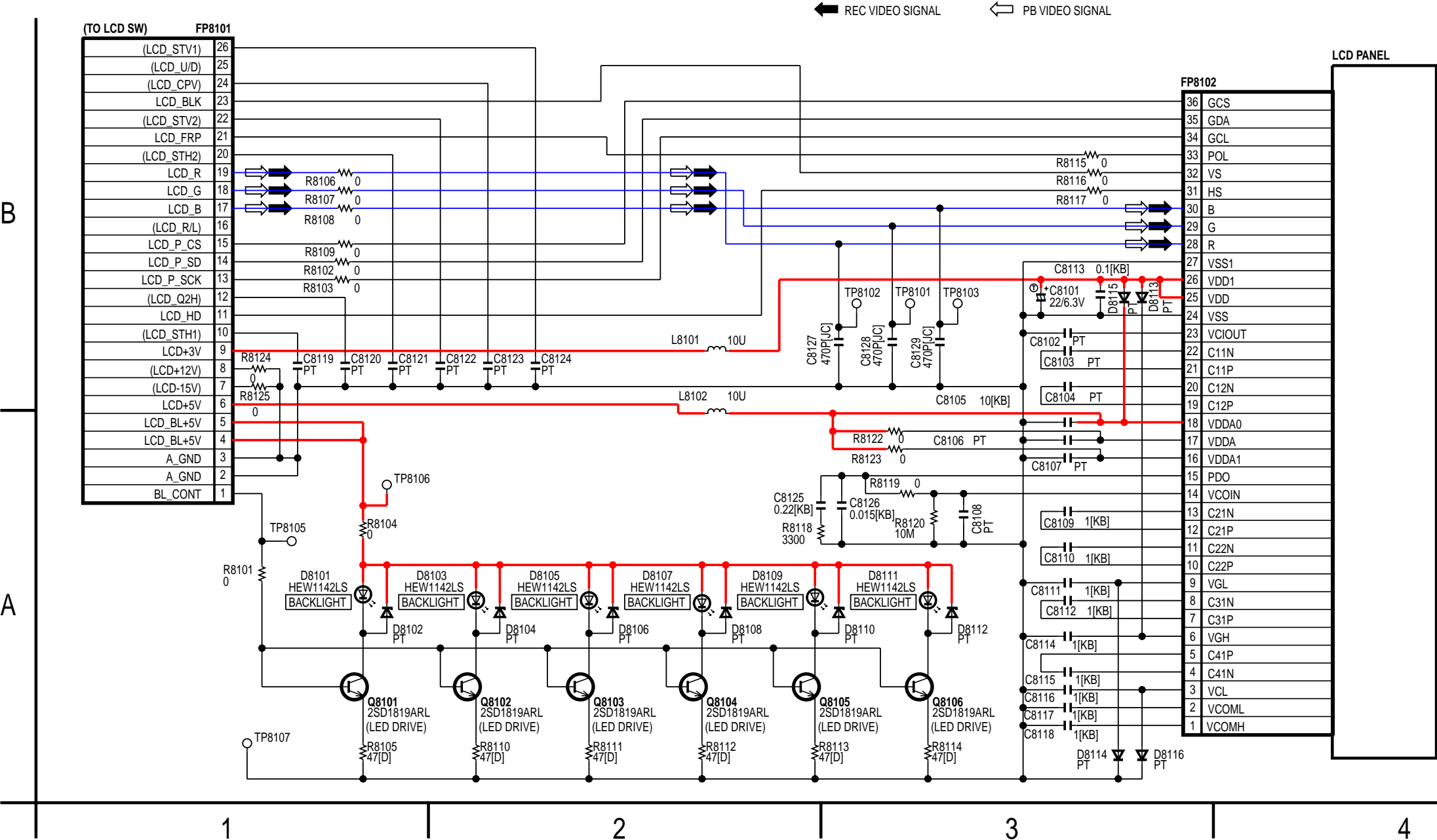
LCD BACKLIGHT SCHEMATIC DIAGRAM (PV-GS39PL,PV-GS69PL)

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, D8107, D8109, AND D8111
ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS.
WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B. INSTEAD OF
INDIVIDUAL PARTS.



LINK TO VOLTAGE CHART

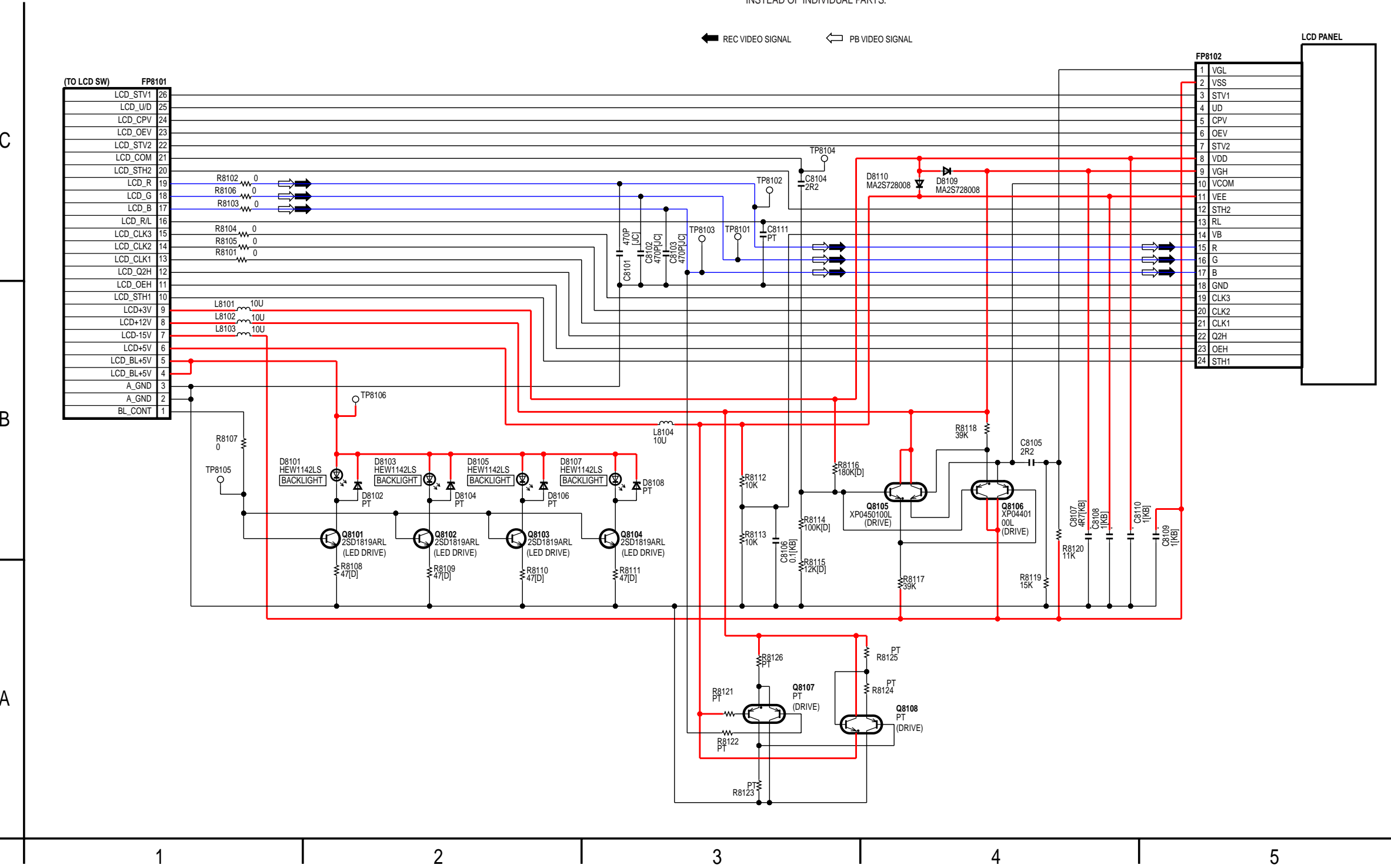
LCD BACKLIGHT SCHEMATIC DIAGRAM (PV-GS29PL)

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: PARTS MARKED "PT" ARE NOT USED.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE: ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, AND D8107 ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS. WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B. INSTEAD OF INDIVIDUAL PARTS.

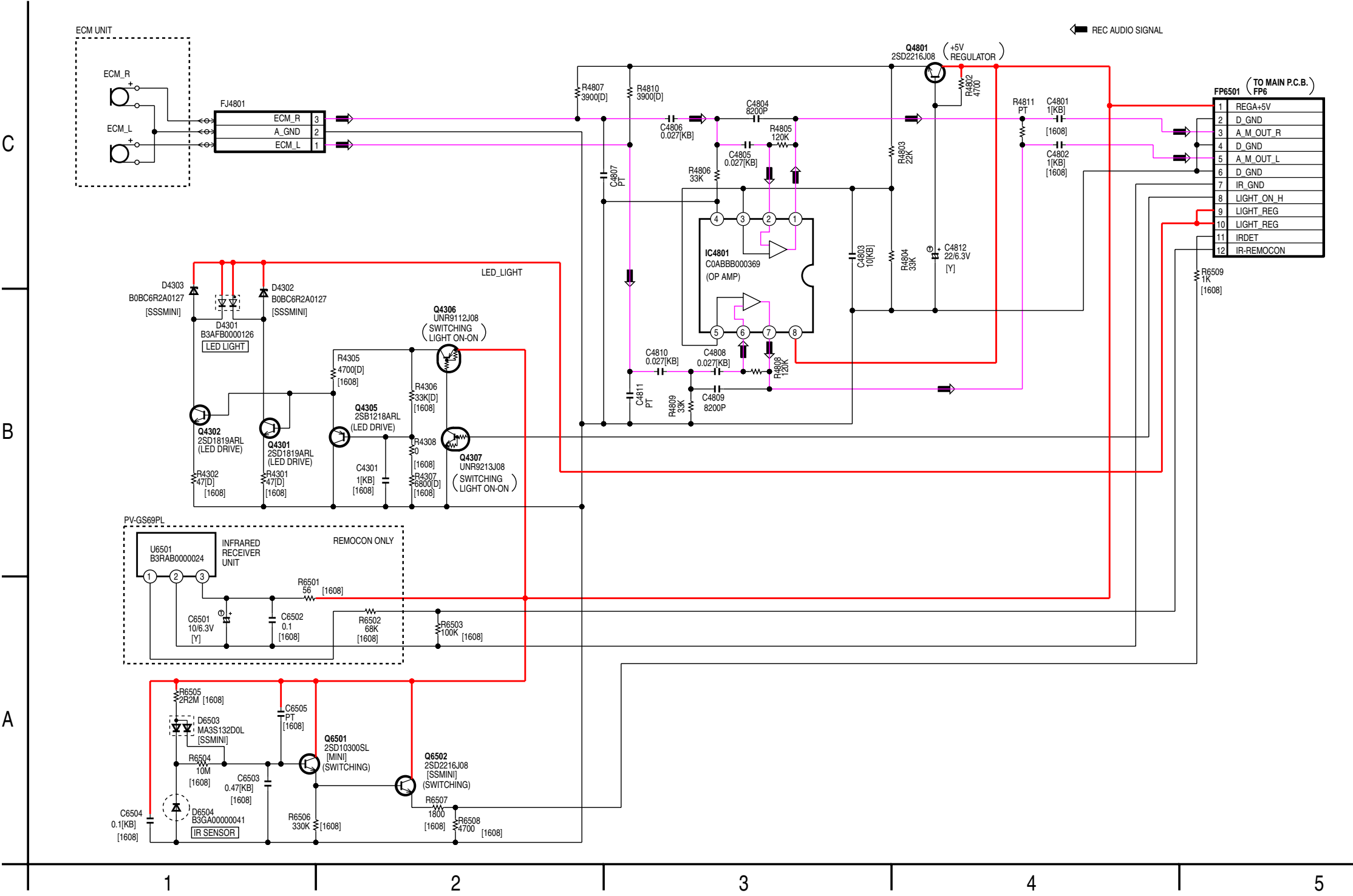


FRONT SCHEMATIC DIAGRAM

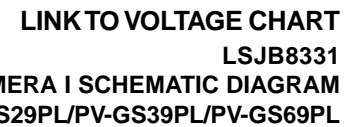
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

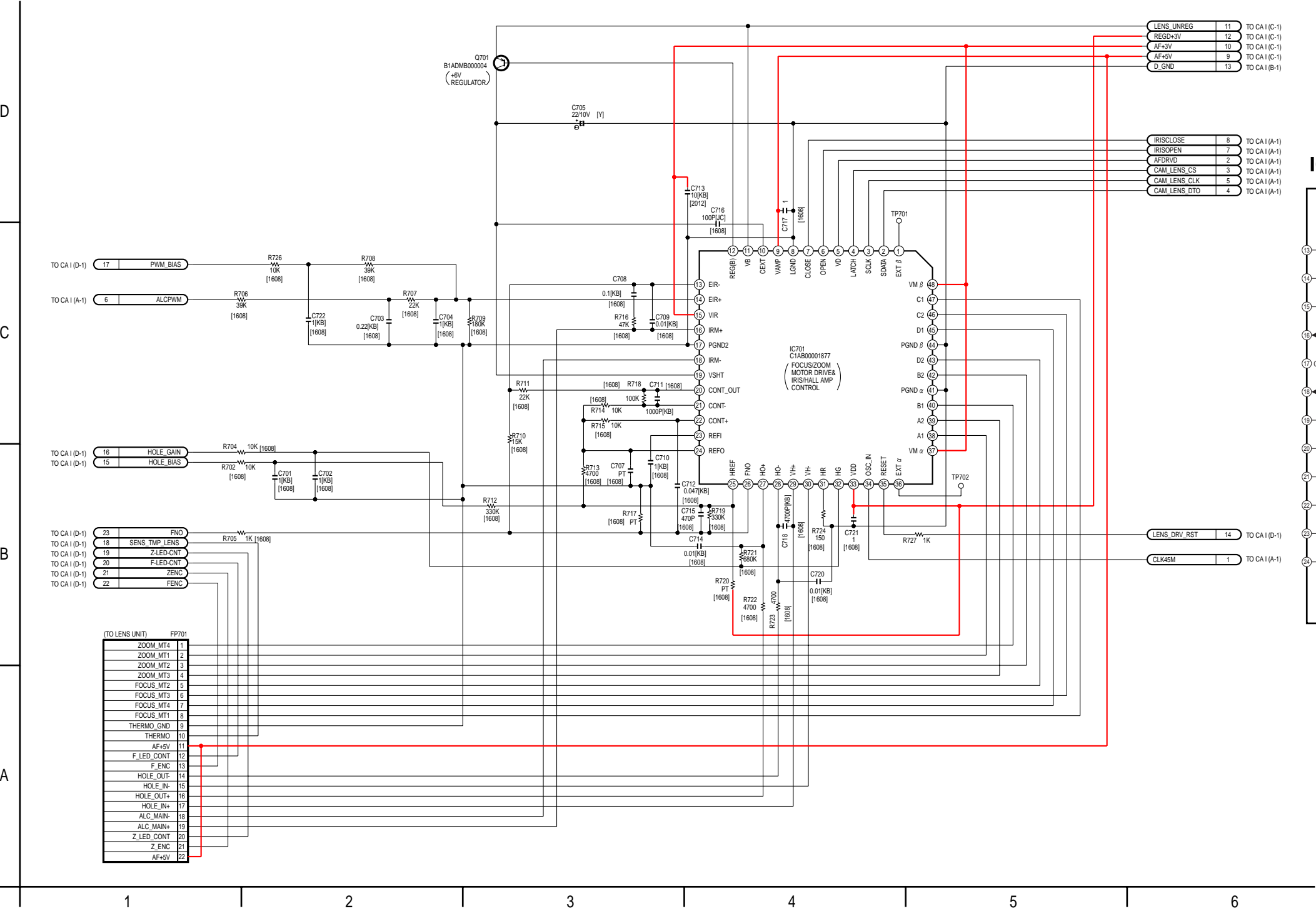


CAMERA II SCHEMATIC DIAGRAM

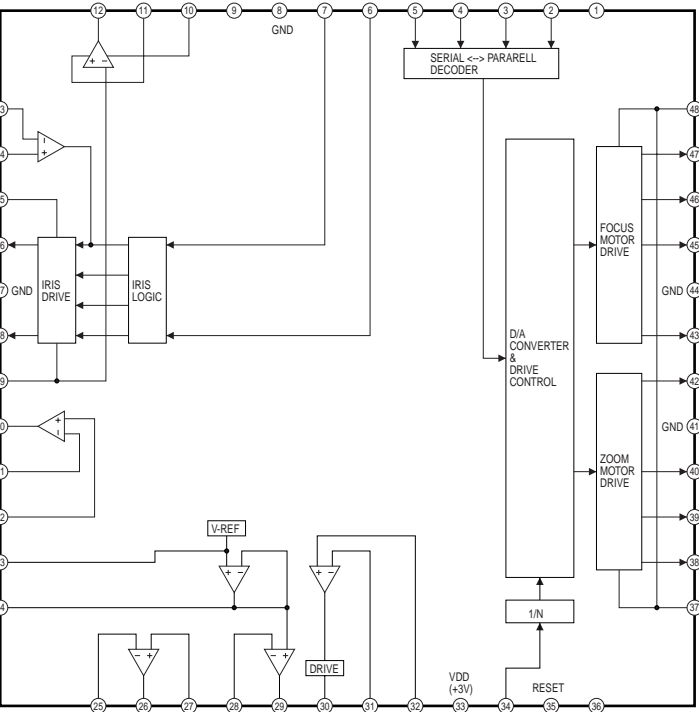
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



IC701 IC- DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART

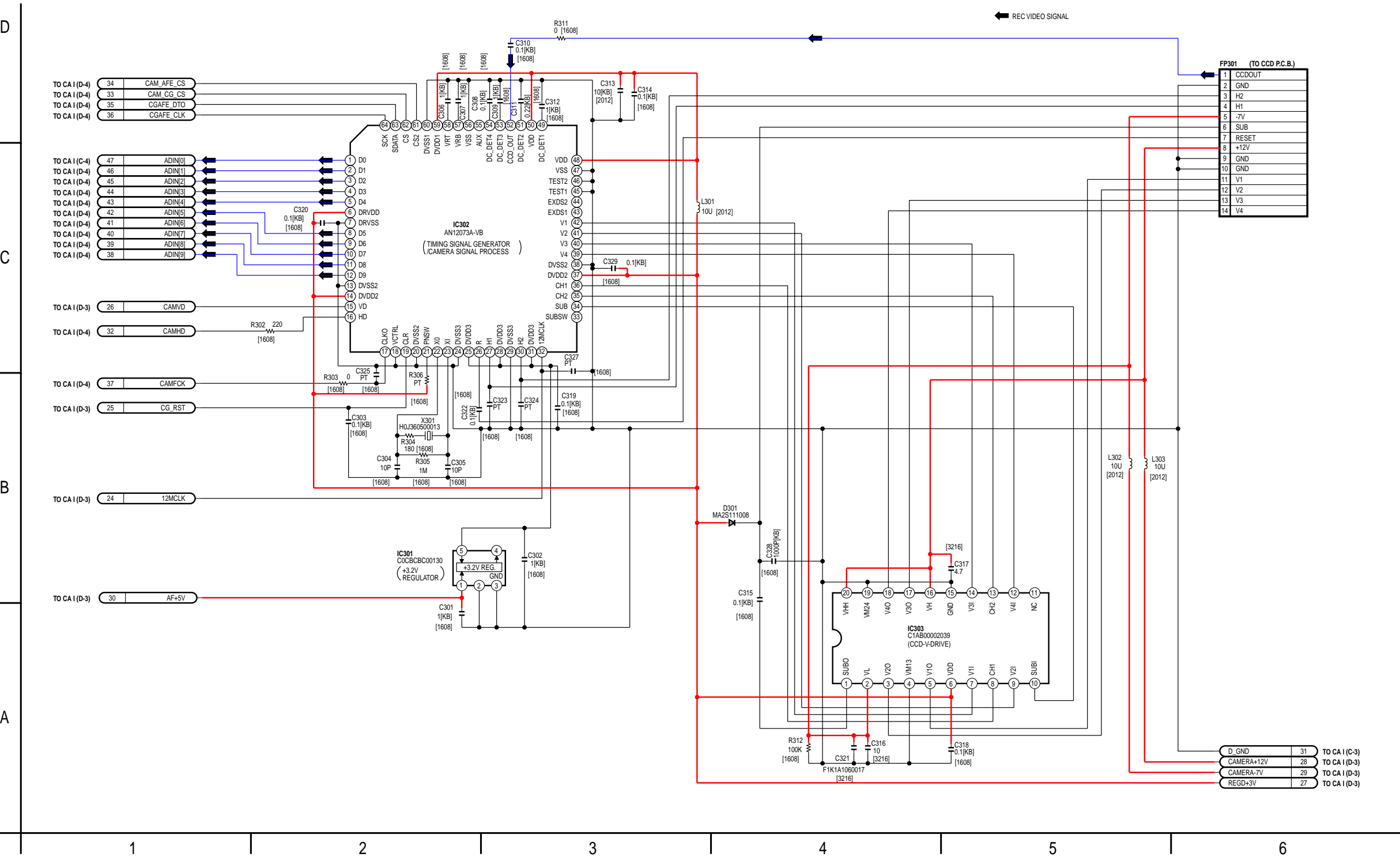
LSJB8331
CAMERA II SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

CAMERA III SCHEMATIC DIAGRAM

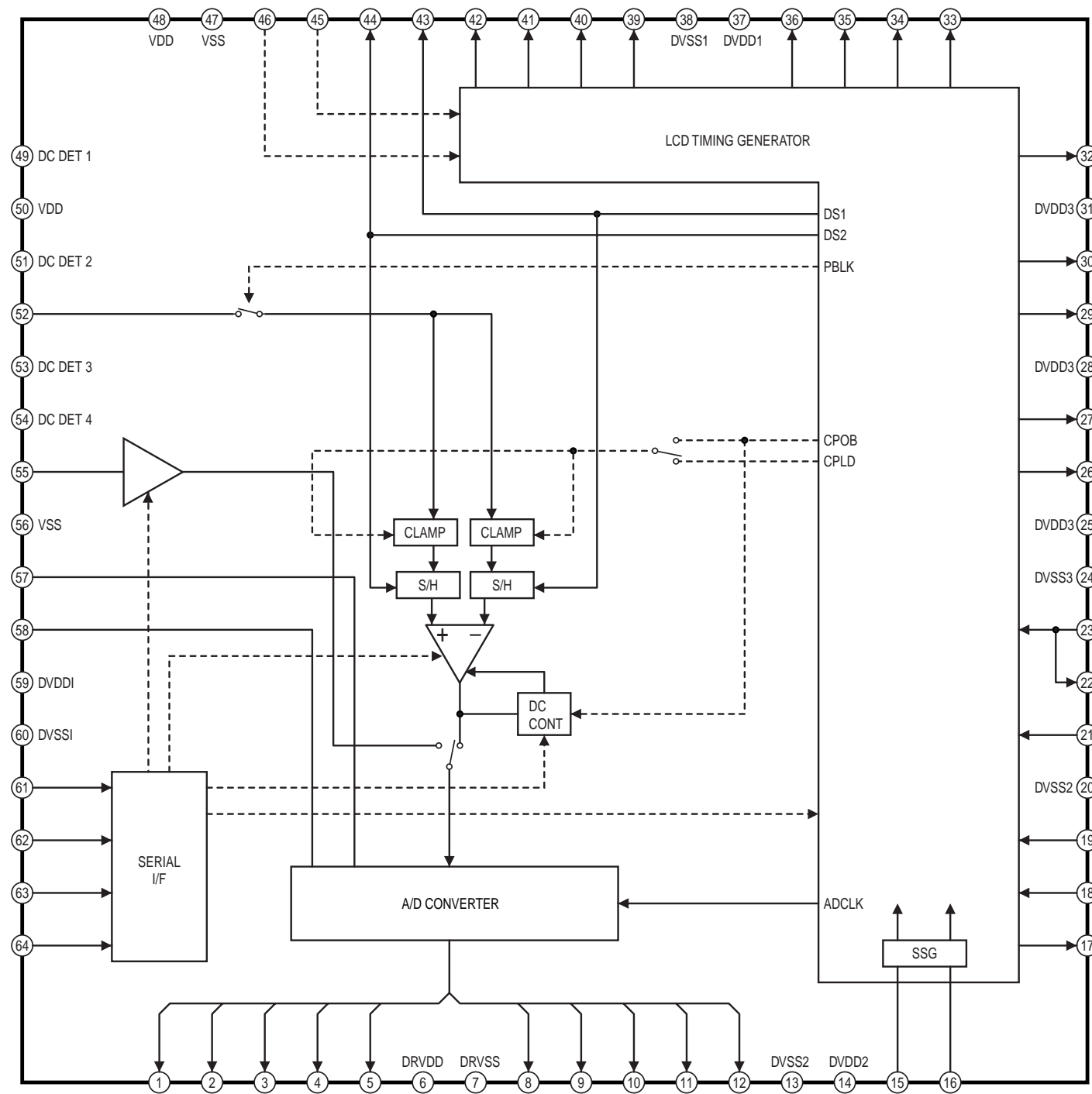
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

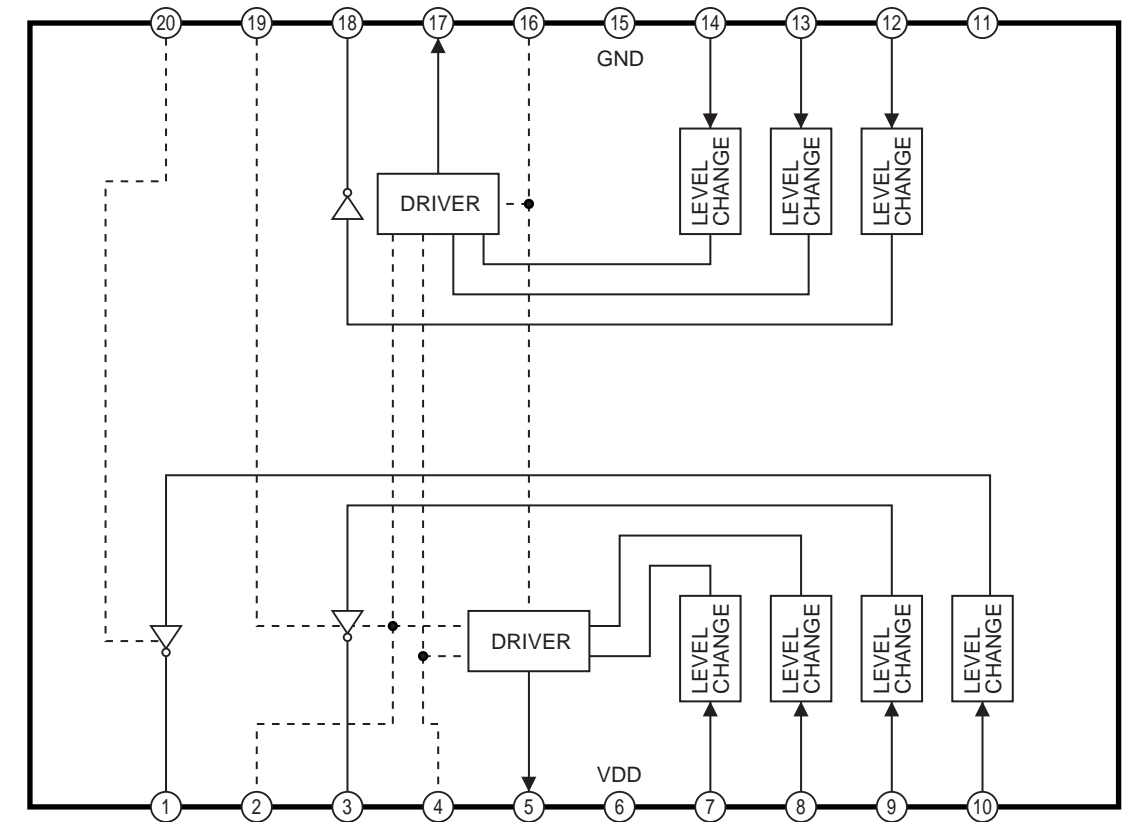
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



IC302 IC- DETAIL BLOCK DIAGRAM



IC303 IC- DETAIL BLOCK DIAGRAM

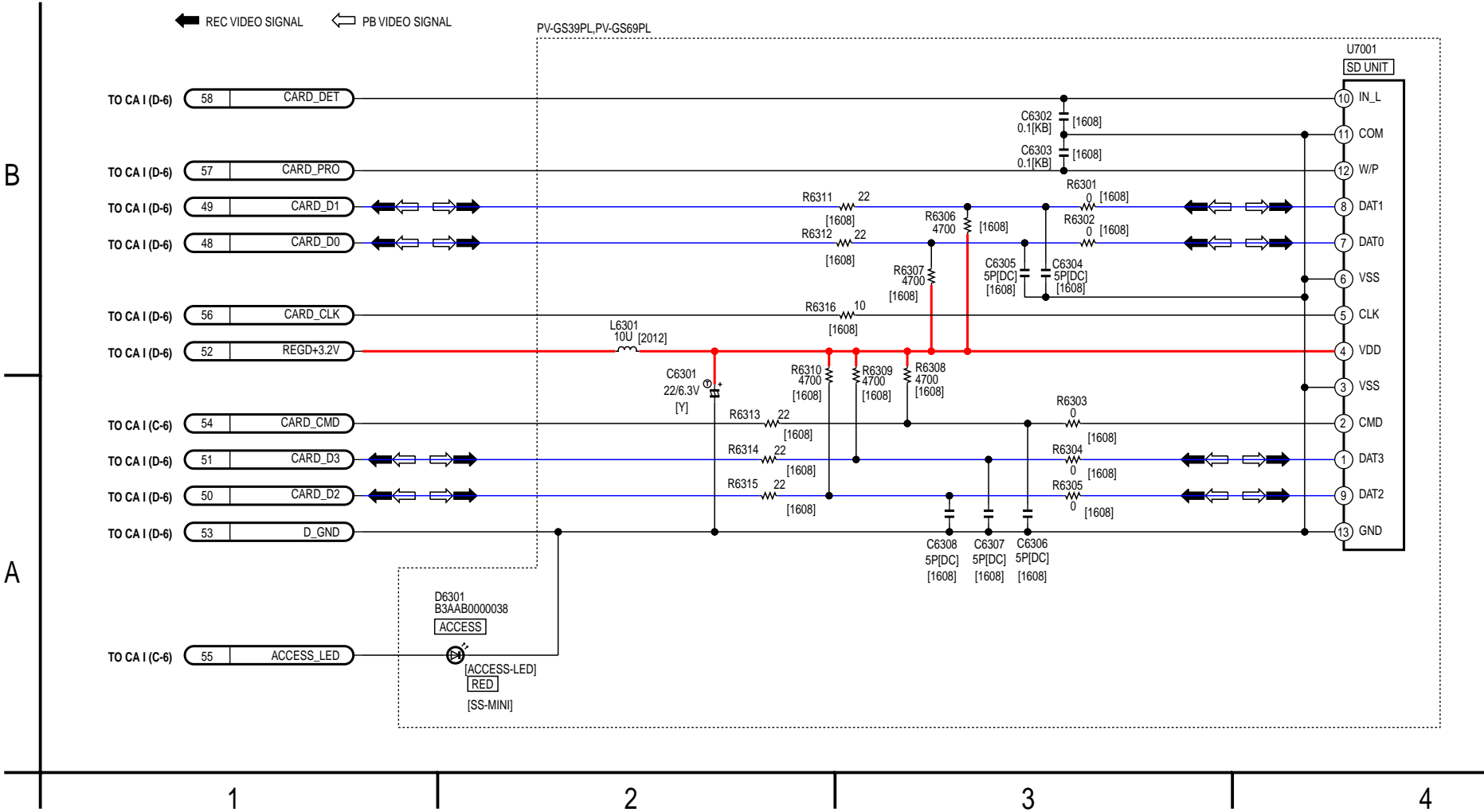


CAMERA IV SCHEMATIC DIAGRAM

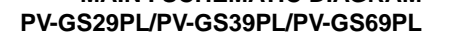
NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

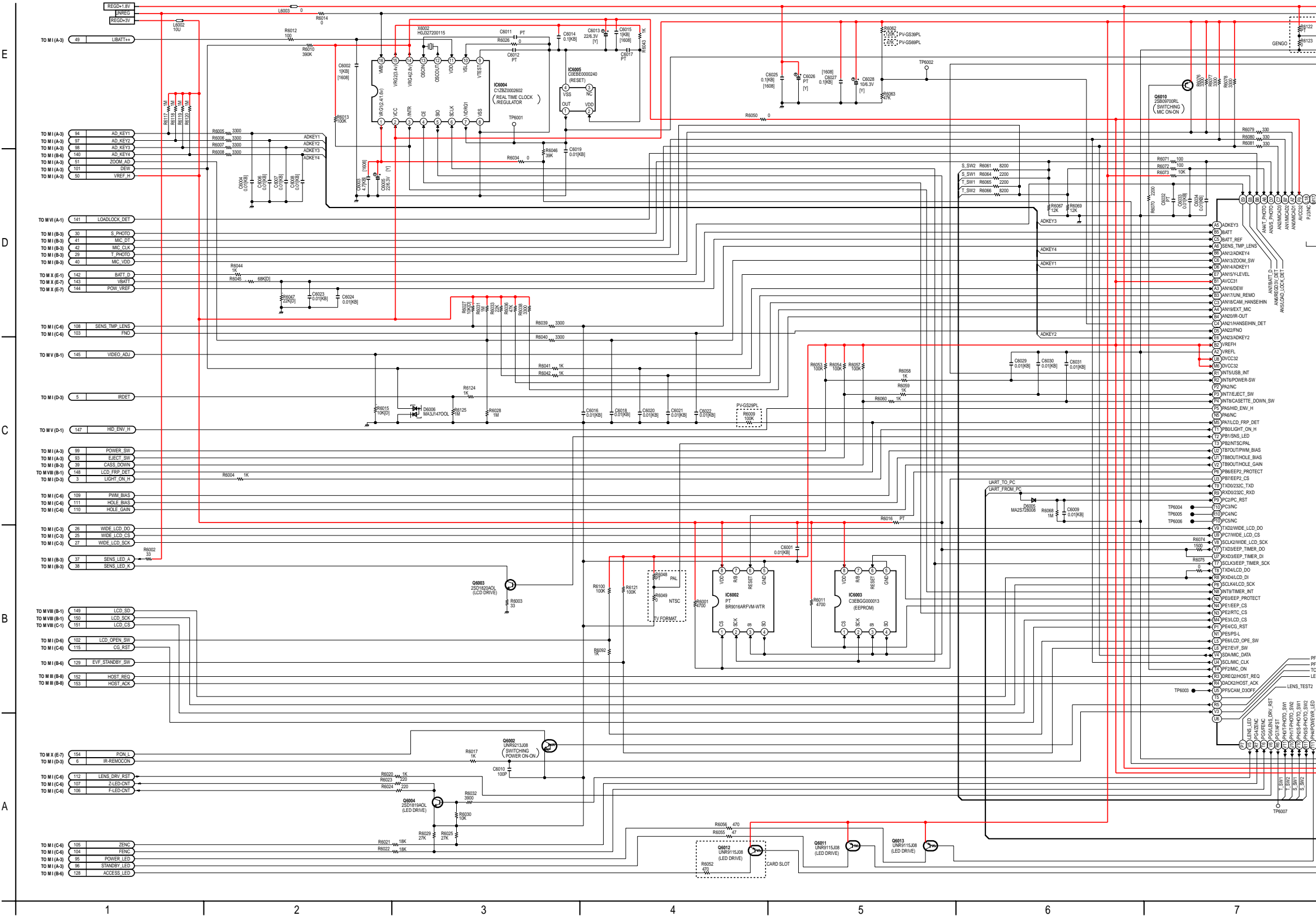


MAIN II SCHEMATIC DIAGRAM (1/2)

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

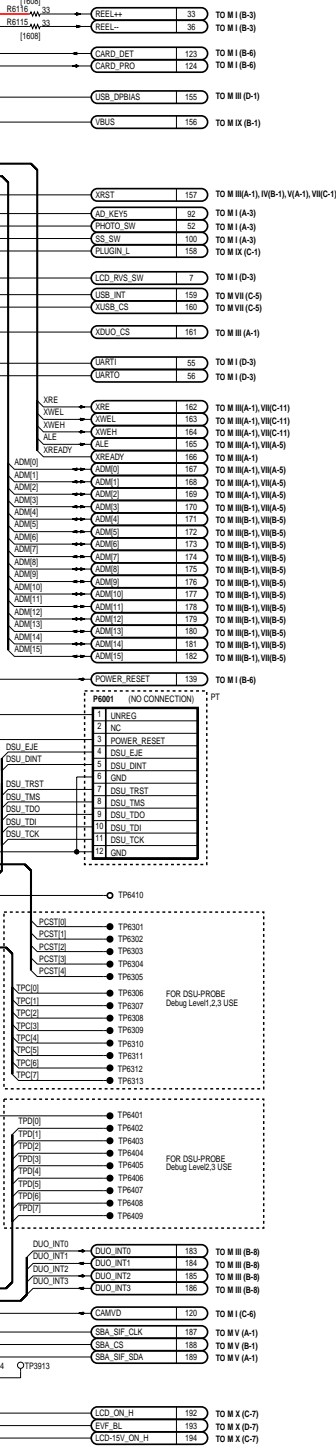


LINK TO VOLTAGE CHART
LSJB8330

MAIN II SCHEMATIC DIAGRAM (1/2)
PV-GS29PL/PV-GS39PL/PV-GS69PL

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



PV-GS29PL/PV-GS39PL/PV-GS69PL

I/O CHART OF IC6001

Pin No.	I/O	Signal Name	Description
1	---	NC	(Not used)
2	I	AVCC31	+2.8V
3	---	AVSS	Ground
4	I	DVCC2	+2.4V
5	---	ENDIAN	(Not used)
6	---	BOOT	(Not used)
7	O	PCTS3	(Not used)
8	O	PCTS0	(Not used)
9	---	INTLV	(Not used)
10	---	SDI / DINT	(Not used)
11	O	PCTS2	(Not used)
12	---	SDAO / TPC	(Not used)
13	---	BW0	(Not used)
14	---	/DBGE	(Not used)
15	---	DCLK	(Not used)
16	---	USB INT	(Not used)
17	O	PCTS1	(Not used)
18	---	SYSRDY	(Not used)
19	---	DVSS	Ground
20	---	TEST1	(Not used)
21	---	BUSMD	(Not used)
22	---	/DRESET	(Not used)
23	---	TEST5	(Not used)
24	I	RESET	Reset : Low
25	---	PLL_ON	(Not used)
26	I	FVCC2	+2.4V
27	---	FVSS	Ground
28	---	NMI	(Not used)
29	---	BW1	(Not used)
30	I	DVCC2	+2.4V
31	I	DVCC31	+1.8V
32	---	NC	(Not used)
33	O	SBA SIF CLK	Sub Audio / SIF Serial Clock
34	---	NC	(Not used)
35	---	NC	(Not used)
36	O	SBA CS	Sub Audio Chip Select
37	---	NC	(Not used)
38	I	SBA SIF DTI	Sub Audio / SIF Serial Data
39	---	NC	(Not used)
40	O	SBA SIF DTO	Sub Audio / SIF Serial Data
41	---	NC	(Not used)
42	I	S PLUG	S-Video In Defect : Low
43	---	NC	(Not used)
44	---	NC	(Not used)
45	I	FVCC3	+3.4V
46	---	FVSS	Ground
47	---	DVSS	Ground
48	I	LCD RVS SW	LCD Reverse : Low
49	---	NC	(Not used)
50	---	NC	(Not used)
51	I	LCD OPEN SW	LCD Open : Low
52	I	AV PLUG	A/V Input Detect : Low
53	I	USB DET	USB Input Detect : Low
54	---	XRST ARM	(Not used)
55	---	ARB	(Not used)
56	---	NC	(Not used)
57	O	USB DPBIAS	USB Bias Addition
58	O	XRST	Reset : Low
59	---	NC	(Not used)
60	---	NC	(Not used)
61	---	NC	(Not used)
62	---	NC	(Not used)
63	---	NC	(Not used)
64	---	NC	(Not used)
65	---	NC	(Not used)
66	O	PWM BIAS	PWM Bias Control
67	I	ZENC	Zoom Encoder
68	I	HOST REQ	Request from DMA
69	---	NC	(Not used)
70	I	DVCC32	+2.8V
71	O	HOLE BIAS	Hall Bias Control

Pin No.	I/O	Signal Name	Description
72	---	NC	(Not used)
73	O	HOST ACK	Acknowledge for DMA
74	---	NC	(Not used)
75	---	NC	(Not used)
76	O	LCD CS	LCD Chip Select
77	O	HOLE GAIN	Hall Amp Gain Control
78	I	FENC	Focus Encoder
79	O	S-PHOTO-SW2	Supply Photo TR Switch 2
80	O	T-PHOTO-SW1	Takeup Photo TR Switch 1
81	O	MIC CLK	MIC Serial Clock
82	I/O	MIC DATA	MIC Serial Data
83	---	DVSS	Ground
84	I	REMOCON	IR Remote Control Data
85	O	S-PHOTO-SW1	Supply Photo TR Switch 1
86	O	PS L	Power Save : Low
87	O	T-PHOTO-SW2	Takeup Photo TR Switch 2
88	---	CAM D3OFF	(Not used)
89	---	NC	(Not used)
90	---	NC	(Not used)
91	---	NC	(Not used)
92	---	NC	(Not used)
93	O	LCD EVF SCK	LCD / EVF Serial Clock
94	O	ERF CLK	Serial Clock
95	O	ERF DO	Serial Data 0
96	I	ERF DI	Serial Data 1
97	---	NC	(Not used)
98	I	LCD EVF DI	LCD / EVF Serial Data
99	---	NC	(Not used)
100	I	DVCC2	+2.4V
101	I	DVCC32	+2.8V
102	O	LCD EVF DO	LCD / EVF Serial Data
103	I	PC RST	RS-232C Reset
104	---	NC	(Not used)
105	I	232C RXD	RS-232C Received Data
106	O	232C TXD	RS-232C Transmitted Data
107	---	NC	(Not used)
108	---	NC	(Not used)
109	---	NC	(Not used)
110	O	LIGHT ON	Light On : High
111	---	NC	(Not used)
112	O	MIC ON	MIC Power On : Low
113	---	NC	(Not used)
114	O	RTC CS	Timer Chip Select
115	O	SNS LED	Sensor LED On : High
116	---	NC	(Not used)
117	---	DVSS	Ground
118	---	OSD SCK	(Not used)
119	---	OSD DO	(Not used)
120	---	NC	(Not used)
121	O	LENS DRV RST	IC701 Reset
122	O	POWER ON	Power On : High
123	I	LENS DRV TST2	Lens Drive Test 2
124	O	LENS LED	LED Control
125	I	LENS DRV TST1	Lens Drive Test 1
126	---	RSTPUP	(Not used)
127	O	EE PROTECT	EEPROM Write Protect
128	O	FLASH WE	EEPROM Write Enable
129	I	DVCC32	+2.8V
130	---	EVF ON H	(Not used)
131	---	NC	(Not used)
132	---	NC	(Not used)
133	---	NC	(Not used)
134	O	EVF BL	EVF Backlight On : High
135	---	NC	(Not used)
136	---	NC	(Not used)
137	---	NC	(Not used)
138	---	NC	(Not used)
139	---	NC	(Not used)
140	---	NC	(Not used)
141	---	DVSS	Ground
142	---	NC	(Not used)

Pin No.	I/O	Signal Name	Description
143	---	NC	(Not used)
144	I	DVCC33	+1.8V
145	O	LCD ON H	LCD Power On : High
146	---	MODE14	(Not used)
147	---	NC	(Not used)
148	---	NC	(Not used)
149	---	LCD BL	(Not used)
150	---	NC	(Not used)
151	I	S/S SW	REC / Pause SW On : Low
152	I	PHOTO SW	Photo SW On : Low
153	---	TEST4	(Not used)
154	I/O	ADM[2]	Address / Data 2
155	---	STNDBY SW	(Not used)
156	I	CARD DET	SD Card Detect
157	I	SD PROTECT	SD Card Protect
158	---	TEST3	(Not used)
159	I/O	ADM[0]	Address / Data 0
160	---	DVSS	Ground
161	---	CAM TEST	(Not used)
162	I/O	ADM[1]	Address / Data 1
163	I/O	ADM[6]	Address / Data 6
164	I/O	ADM[3]	Address / Data 3
165	I/O	ADM[5]	Address / Data 5
166	I/O	ADM[4]	Address / Data 4
167	---	FVSS	Ground
168	I	FVCC2	+2.4V
169	I/O	ADM[9]	Address / Data 9
170	---	TEST0	(Not used)
171	I/O	ADM[8]	Address / Data 8
172	I/O	ADM[7]	Address / Data 7
173	I/O	ADM[10]	Address / Data 10
174	I/O	ADM[13]	Address / Data 13
175	I/O	ADM[11]	Address / Data 11
176	I/O	ADM[12]	Address / Data 12
177	I	DVCC33	+1.8V
178	---	NC	(Not used)
179	I/O	ADM[15]	Address / Data 15
180	---	NC	(Not used)
181	---	DVSS	Ground
182	O	XDUO CS	IC3001 Chip Select
183	O	XWEH	Write Enable : Low
184	O	XREADY	Ready : Low
185	O	XRE	Read Enable : Low
186	---	FVSS	Ground
187	I	FVCC2	+2.4V
188	I/O	ADM[14]	Address / Data 14
189	---	USB CS	(Not used)
190	---	NC	(Not used)
191	O	CCD ON H	CCD Power On : High
192	O	ALE	Latch Enable
193	O	XWEL	White Enable : Low
194	---	TEST2	(Not used)
195	I	DVCC33	+1.8V
196	I	DVCC2	+2.4V
197	---	ICS3	(Not used)
198	---	ICS2	(Not used)
199	---	NC	(Not used)
200	---	XT1	(Not used)
201	---	CVCCH	(Not used)
202	---	CAP1	(Not used)
203	---	CAP2	(Not used)
204	---	XT2	(Not used)
205	O	TDO	Test Data
206	---	TDI	Test Point
207	---	TMS	Test Point
208	---	TRST	(Not used)
209	---	TCK	Test Point
210	I	DVCC34	+2.8V
211	I	CVCC2	+2.4V
212	I	X1	13.5MHz Clock
213	---	CVSS	Ground

Pin No.	I/O	Signal Name	Description
214	O	X2	13.5MHz Clock
215	---	NC	(Not used)
216	I	CASS DOWN	Cassette Down : Low
217	O	CG RST	IC302 Reset
218	---	USB2 INT	USB Interrupt
219	---	AFST	(Not used)
220	I	DUO INT3	IC3001 Interrupt 3
221	I	DUO INT2	IC3001 Interrupt 2
222	I	DUO INT1	IC3001 Interrupt 1
223	---	DVSS	Ground
224	I	HPDET L	Headphone Detect : Low
225	I	TIMER INT	Timer Interrupt
226	I	CAM VD	Camera V-sync
227	I	DUO INT0	IC3001 Interrupt 0
228	---	EXT H	(Not used)
229	---	NC	(Not used)
230	---	NC	(Not used)
231	I	EJECT SW	Eject SW On : Low
232	---	NC	(Not used)
233	O	ACCESS LED	Access LED On : Low
234	---	OSD CS	(Not used)
235	I	POWER SW	Power SW On : Low
236	---	OSD RST	(Not used)
237	---	NC	(Not used)
238	---	NC	(Not used)
239	O	EEP CS	IC 6002 Chip Select
240	I	DVCC34	+2.8V
241	O	FLASH CE	IC 6009 Chip Select
242	---	NC	(Not used)
243	---	NC	(Not used)
244	---	NC	(Not used)
245	I	LIGHT SW	Light SW On : Low
246	O	STNDBY LED	Standby LED On : Low
247	O	POWER LED	Power LED On : Low
248	---	NC	(Not used)
249	O	CROSS LED	CROSS LED ON : High
250	---	DVSS	Ground
251	---	NC	(Not used)
252	I	DVCC2	+2.4V
253	---	AVSS	Ground
254	I	LOAD LOCK DET	Loading Lock Detect
255	I	AVCC32	+2.8V
256	I	T PHOTO	Takeup Photo TR On : Low
257	I	BATT D	Battery Detect
258	I	S PHOTO	Supply Photo TR On : Low
259	I	MIC AD1	MIC On : High
260	I	MIC AD2	MIC Serial Clock
261	I	MIC AD3	MIC Serial Data
262	---	AVSS	Ground
263	I	ADKEY 1	ANALOG KEY INPUT
264	I	ADKEY 4	ANALOG KEY INPUT
265	I	SENSE TMP LENS	Lens Temperature Sensor
266	I	ZOOM	ANALOG KEY INPUT
267	I	REGD3V DET	+3V Detect
268	I	BATT REF	V-Ref for Battery
269	I	ADKEY 3	ANALOG KEY INPUT
270	I	BATTERY	Battery Voltage Detect
271	I	Y LEVEL ADJ	Y LEVEL ADJUST
272	I	ADKEY 2	ANALOG KEY INPUT
273	I	EXT MIC	EXT MIC In Detect : Low
274	I	IROUT	IR Detect
275	I	FNO	F Number
276	I	DEW	Dew Sensor
277	I	HANSEIHW DET	(Not used)
278	I	UNI REMO	Wired Remote Control Data
279	I	JACK DET	JACK Detect
280	---	VREFL	V-Ref Low (0V)
281	I	VREFH	V-Ref High (+2.8V)
282	---	NO PIN	(Not used)
283	---	NO PIN	(Not used)
284	---	NO PIN	(Not used)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



I/O CHART OF IC3001

Pin No.	I/O	Signal Name	Description
1	I	TMS	Test Mode Select
2	I	TCK	Test Clock
3	I	TDI	Test Data
4	I	VDD18	+1.8V
5	O	TDO	Test Data
6	I	VDD18	+1.8V
7	I	XDUO_CS	IC3001 Chip Select : Low
8	I/O	ADM(15)	Address / Data 15
9	I/O	ADM(14)	Address / Data 14
10	I/O	ADM(13)	Address / Data 13
11	I/O	ADM(12)	Address / Data 12
12	---	VSS	Ground
13	I/O	ADM(11)	Address / Data 11
14	I/O	ADM(10)	Address / Data 10
15	I/O	ADM(9)	Address / Data 9
16	I/O	ADM(8)	Address / Data 8
17	---	VSS	Ground
18	I	VDD15	+1.5V
19	I/O	ADM(7)	Address / Data 7
20	I/O	ADM(6)	Address / Data 6
21	I/O	ADM(5)	Address / Data 5
22	I/O	ADM(4)	Address / Data 4
23	---	VSS	Ground
24	I/O	ADM(3)	Address / Data 3
25	I/O	ADM(2)	Address / Data 2
26	I/O	ADM(1)	Address / Data 1
27	I	VDD18	+1.8V
28	I/O	ADM(0)	Address / Data 0
29	I	ALE	Latch Enable
30	I	XWEH	Write Enable:Low
31	I	XWEL	Write Enable:Low
32	I	VDD18	+1.8V
33	I	XRE	Read Enable:Low
34	I	XREADY	Ready:Low
35	---	XRST_ARM	(Not used)
36	I	VDD15	+1.5V
37	---	VSS	Ground
38	I	VCO_AVDD25	+2.5V
39	I	VCO_AVDD25	+2.5V
40	I	FSLPFI	FSPLL LPF In
41	---	VCO_AVSS	Ground
42	---	VCO_AVSS	Ground
43	I	PLL_AVDD25	+2.5V
44	I	PLL_AVDD25	+2.5V
45	---	PLL_AVSS	Ground
46	---	PLL_AVSS	Ground
47	---	VSS	Ground
48	I	FCK45	4.5MHz Clock
49	I	CAMHD	Camera HD Pulse
50	I	CAMVD	Camera VD Pulse
51	I	ADIN(9)	Camera Data 9
52	I	ADIN(8)	Camera Data 8
53	I	VDD18_30	+3.0V
54	I	ADIN(7)	Camera Data 7
55	I	ADIN(6)	Camera Data 6
56	I	ADIN(5)	Camera Data 5
57	I	ADIN(4)	Camera Data 4
58	I	ADIN(3)	Camera Data 3
59	I	ADIN(2)	Camera Data 2
60	I	ADIN(1)	Camera Data 1
61	I	ADIN(0)	Camera Data 0
62	I	VDD18_30	+3.0V
63	---	FXA	(Not used)
64	---	FCB	(Not used)
65	---	F2C	(Not used)
66	---	ZACOMP	(Not used)
67	---	VSS	Ground
68	I	VDD15	+1.5V
69	---	ZBCOMP	(Not used)
70	---	ZCCOMP	(Not used)
71	---	ZDCOMP	(Not used)
72	---	SIG	(Not used)
73	O	ALCPWM	ALC PWM Control

Pin No.	I/O	Signal Name	Description
74	I	VDD18_30	+3.0V
75	O	IRISCLOSE	Iris Close Control
76	O	IRISOPEN	Iris Open Control
77	O	HOST_REQ	Request for DMA
78	I	HOST_ACK	Acknowledge for DMA
79	I	VDD18_30	+3.0V
80	O	DUO_INT3	IC3001 Interrupt 3
81	---	VSS	Ground
82	O	DUO_INT2	IC3001 Interrupt 2
83	O	DUO_INT1	IC3001 Interrupt 1
84	O	DUO_INT0	IC3001 Interrupt 0
85	---	VSS	Ground
86	I	VDD15	+1.5V
87	---	VSS	Ground
88	---	VSS	Ground
89	I	VDD18_30	+3.0V
90	I	VDD18_30	+3.0V
91	I	SD_VDD15	+1.5V
92	I	SD_VDD15	+1.5V
93	---	SD_VSS	Ground
94	---	SD_VSS	Ground
95	I	SD_VDD25	+2.5V
96	I	VDD18	+1.8V
97	---	SCLK54I	(Not used)
98	I	VDD18	+1.8V
99	---	CLKSEL2	(Not used)
100	---	CLK27B	(Not used)
101	---	CLKSEL0	(Not used)
102	O	CLK27A	27MHz Clock
103	---	CLKSEL1	(Not used)
104	---	CLK135	(Not used)
105	I	SD_VDD25	+2.5V
106	---	SD_VSS	Ground
107	I	SD_VDD15	+1.5V
108	---	VSS	Ground
109	I	SD_VDD15	+1.5V
110	---	TESTMD(0)	(Not used)
111	---	TESTMD(1)	(Not used)
112	---	TESTMD(2)	(Not used)
113	I	SD_VDD15	+1.5V
114	---	SD_VSS	Ground
115	I	SD_VDD25	+2.5V
116	---	TESTMD(3)	(Not used)
117	---	TESTMD(4)	(Not used)
118	---	TESTMD(5)	(Not used)
119	---	VSS	Ground
120	I	VDD18	+1.8V
121	---	VSS(NC)	Ground
122	I	VDD18	+1.8V
123	---	S400	(Not used)
124	---	BIAS2K	(Not used)
125	---	VSS	Ground
126	I	CLK24I	24.576MHz Clock
127	I	VDD25	+2.5V
128	---	VSS(NC)	Ground
129	---	VSS(NC)	Ground
130	O	CLK24O	24.576MHz Clock
131	I	SD_VDD25	+2.5V
132	---	SD_VSS	Ground
133	I	SD_VDD15	+1.5V
134	I	VDD15	+1.5V
135	---	1394_AVSS	Ground
136	I	1394_AVDD15	+1.5V
137	---	1394_AVSS	Ground
138	O	R(1)	Current Limit Resistor(1)
139	---	VSS(NC)	Ground
140	I	R(0)	Current Limit Resistor(0)
141	I	1394_AVDD30	+3.0V
142	---	VSS(NC)	Ground
143	---	1394_AVSS	Ground
144	---	1394_AVSS	Ground
145	I/O	TPBN	Transaction Data B(-)
146	---	VSS(NC)	Ground

Pin No.	I/O	Signal Name	Description
147	---	VSS(NC)	Ground
148	I/O	TPBP	Transaction Data B(+)
149	---	VSS(NC)	Ground
150	I/O	TPAN	Transaction Data A(-)
151	I/O	TPAP	Transaction Data A(+)
152	I/O	TPBIAS	Transaction Bias
153	I	1394_AVDD30	+3.0V
154	I	1394_AVDD15	+1.5V
155	I	VDD15	+1.5V
156	I	XRST	Reset:Low
157	---	SSP	(Not used)
158	I	VDD18	+1.8V
159	I	HID	Head Switch Pulse
160	I	VDD18	+1.8V
161	I/O	DBR3	Digital Rec/PB Data 3
162	I/O	DBR2	Digital Rec/PB Data 2
163	I/O	DBR1	Digital Rec/PB Data 1
164	I/O	DBR0	Digital Rec/PB Data 0
165	---	VSS	Ground
166	O	ACKR	Acknowledge for RIP
167	I/O	REQOR	Request for RIP
168	I/O	ADDA(3)	Address/Data 3
169	I/O	ADDA(2)	Address/Data 2
170	---	VSS	Ground
171	I/O	ADDA(1)	Address/Data 1
172	I	VDD15	+1.5V
173	I/O	ADDA(0)	Address/Data 0
174	O	VAL	BUS Control
175	O	READH	BUS Control
176	I/O	INTSEG	Interrupt signal for Servo
177	I	VDD18	+1.8V
178	O	DODAT	Digital Audio Data
179	I	VDD18	+1.8V
180	O	DOLRCK	Digital Audio L/R Clock
181	O	DOMCK	Digital Audio Master Clock
182	O	DOBCK	Digital Audio Bit Clock
183	I	AIDAT1	Digital Audio Data
184	---	AIDAT2	(Not used)
185	---	VSS	Ground
186	---	ADECOAT	(Not used)
187	---	VSS	Ground
188	---	CLK27C	(Not used)
189	---	LYCIO0	(Not used)
190	---	LYCIO1	(Not used)
191	---	LYCIO2	(Not used)
192	---	LYCIO3	(Not used)
193	I	VDD15	+1.5V
194	---	LYCIO4	(Not used)
195	---	LYCIO5	(Not used)
196	---	LYCIO6	(Not used)
197	---	LYCIO7	(Not used)
198	I	VDD18	+1.8V
199	?	FRP	?
200	?	INF	?
201	I/O	SHMFINT	USB Data 1
202	I/O	SHMFIRD	USB Data 2
203	I	VDD18	+1.8V
204	---	VSS	Ground
205	I/O	SHMFIMR	USB Data 5
206	I/O	SHMFIRS	USB Data 6
207	I/O	SHMFICS	USB Data 7
208	I/O	SHMFID0	USB Data 8
209	I/O	SHMFID1	USB Data 9
210	I/O	SHMFID2	USB Data 10
211	I/O	SHMFID3	USB Data 11
212	I/O	SHMFID4	USB Data 12
213	I/O	SHMFID5	USB Data 13
214	I/O	SHMFID6	USB Data 14
215	I/O	SHMFID7	USB Data 15
216	---	CLK27D	(Not used)
217	---	YCIO(0)	(Not used)
218	---	YCIO(1)	(Not used)
219	---	YCIO(2)	(Not used)

Pin No.	I/O	Signal Name	Description
220	---	YCIO(3)	(Not used)
221	---	VSS	Ground
222	---	YCIO(4)	(Not used)
223	---	YCIO(5)	(Not used)
224	---	YCIO(6)	(Not used)
225	---	YCIO(7)	(Not used)
226	---	CLK27X	(Not used)
227	---	YCIN(0)	(Not used)
228	---	YCIN(1)	(Not used)
229	---	YCIN(2)	(Not used)
230	---	YCIN(3)	(Not used)
231	---	YCIN(4)	(Not used)
232	---	YCIN(5)	(Not used)
233	I	VDD15	+1.5V
234	---	YCIN(6)	(Not used)
235	---	YCIN(7)	(Not used)
236	---	VSS	Ground
237	I	VDD18	+1.8V
238	---	BUS_MODE	(Not used)
239	I	VDD18	+1.8V
240	---	VSS	Ground
241	I	DAC_AVDD25	+2.5V
242	O	LCDROUT	LCD-Red Signal
243	I	LCDRVBS	LCD R Bias
244	---	DAC_AVSS	Ground
245	---	DAC_AVSS	Ground
246	I	DAC_AVDD25	+2.5V
247	I	DAC_AVDD25	+2.5V
248	O	LCDGOUT	LCD-Green Signal
249	I	LCDGVBS	LCD G Bias
250	I	LCDREF	LCD Reference Voltage
251	---	DAC_AVSS	Ground
252	I	DAC_AVDD25	+2.5V
253	O	LCDBOUT	LCD-Blue Signal
254	I	LCDBVBS	LCD B Bias
255	---	DAC_AVSS	Ground
256	---	DAC_AVSS	Ground
257	I	DAC_AVDD25	+2.5V
258	I	DAC_AVDD25	+2.5V
259	O	YOUT	Luminance Signal
260	I	YVBS	Y Bias
261	I	YREF	Y Reference Voltage
262	---	DAC_AVSS	Ground
263	I	DAC_AVDD25	+2.5V
264	O	COUT	Chrominance Signal
265	I	CVBS	C Bias
266	I	CREF	C Reference Voltage
267	---	DAC_AVSS	Ground
268	---	VSS	Ground
269	I	VSDD32	+3.2V
270	---	VSS	Ground
271	O	SDCLK	SD Serial Clock
272	I/O	DATA(3)	SD Data 3
273	I/O	DATA(2)	SD Data 2
274	I/O	DATA(1)	SD Data 1
275	I/O	DATA(0)	SD Data 0
276	---	VSS(NC)	Ground
277	I/O	CMD	CMD for SD
278	---	VSS(NC)	Ground
279	I	SD_VDD32	+3.2V
280	I	VDD15	+1.5V
281	O	CLK48O	48MHz Clock
282	I	CLK48I	48MHz Clock
283	---	VSS(NC)	Ground
284	---	VSS(NC)	Ground
285	---	VSS(NC)	Ground
286	I	VDD25	+2.5V
287	---	VSS	Ground
288	---	VSS(NC)	Ground
289	---	VSS(NC)	Ground
290	---	VSS(NC)	Ground
291	I/O	USB_DP	USB Data (+)
292	I/O	USB_DN	USB Data (-)

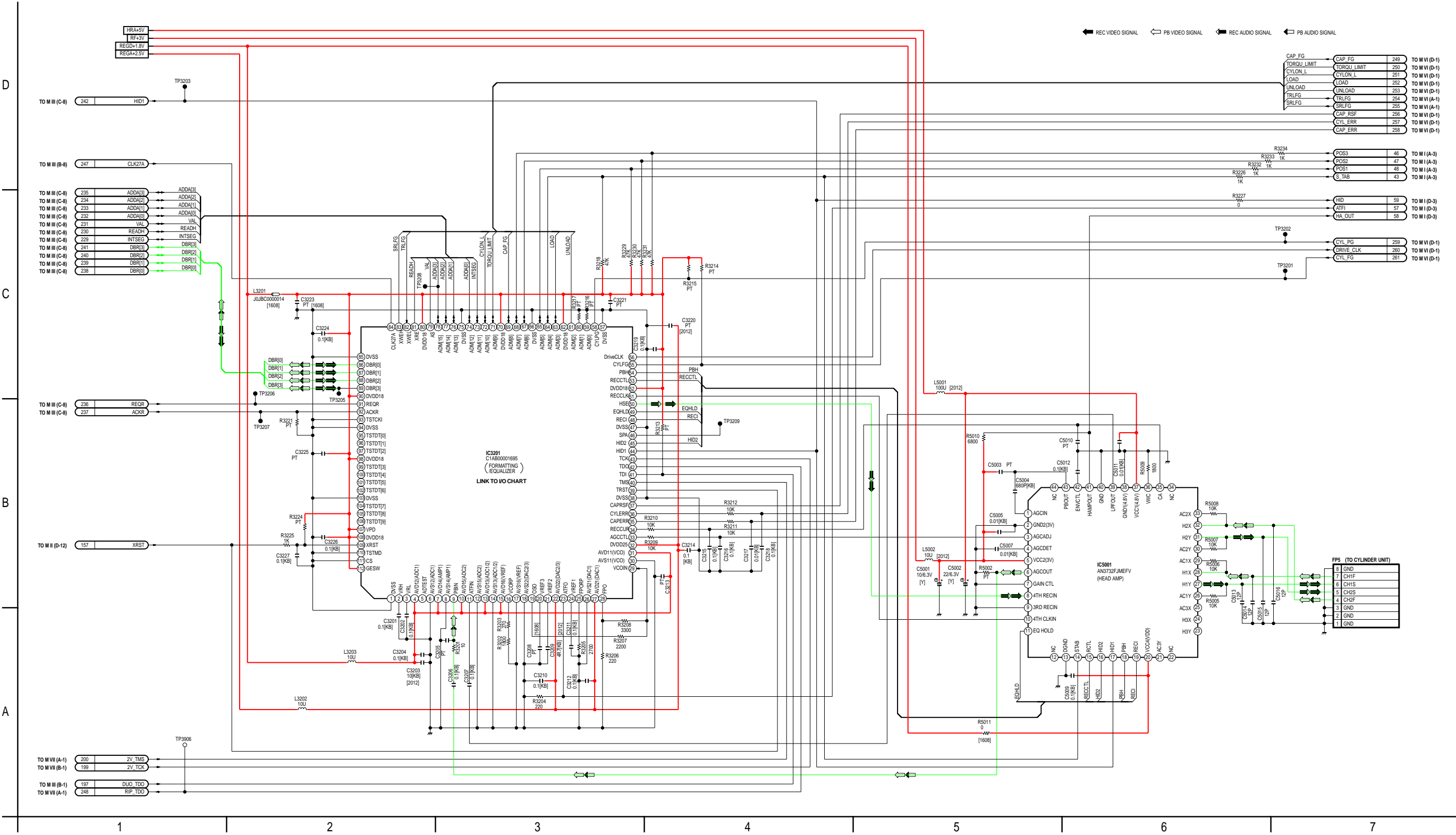
Pin No.	I/O	Signal Name	Description
293	---	VSS	Ground
294	I	USB_VDD32	+3.2V
295	I	USB_VDD32	+3.2V
296	I	VDD30	+3.0V
297	O	CAMLENSDTO	Lens Drive Serial Data
298	O	CAMLENSCLK	Lens Drive Serial Clock
299	O	CAMLENSCS	Lens Drive Chip Select
300	O	CAMCGAFEDTO	Camera DAC/TG Serial Data
301	I	VDD30	+3.0V
302	O	CAMCGAFECLK	Camera DAC/TG Serial Clock
303	O	CAMCGCS	TG Chip Select
304	O	CAMAFECS	Camera DAC Chip Select
305	---	VSS	Ground
306	---	OSDVR	(Not used)
307	---	OSDVG	(Not used)
308	---	OSDVB	(Not used)
309	---	OSDBLKA	(Not used)
310	---	VSS	Ground
311	I	VDD15	+1.5V
312	---	OSDBLKB	(Not used)
313	I	FAD_VDD15	+1.5V
314	---	FAD_VSS	Ground
315	I	FAD_VDD32	+3.2V
316	---	OSDHD	(Not used)
317	---	OSDVD	(Not used)
318	O	LCDVBLK	LCD V-Sync Pulse
319	O	LCDHD	LCD H-Sync Pulse
320	---	VSS	Ground
321	---	LCDPOL	(Not used)
322	I	VDD30	+3.0V
323	O	CLK45M_ZB	4.5MHz Clock
324	O	AFDRVD	Lens Drive VD Pulse
325	---	LINPWM	(Not used)
326	---	OSDCLK	(Not used)
327	O	FSLPFO	FSPLL LPF Out
328	---	DTCLK	(Not used)
329	---	DVM	(Not used)
330	I	FAD_VDD32	+3.2V
331	---	FAD_VSS	Ground
332	I	FAD_VDD15	+1.5V
333	I	VDD30	+3.0V
334	I	VDD18	+1.8V
335	---	TRACECLK	(Not used)
336	---	TRACESYNC	(Not used)
337	---	TRACEPKT(0)	(Not used)
338	---	TRACEPKT(1)	(Not used)
339	I	VDD18	+1.8V
340	I	VDD15	+1.5V
341	---	VSS	Ground
342	I	SD_VDD15	+1.5V
343	---	SD_VSS	Ground
344	I	SD_VDD25	+2.5V
345	---	TRACEPKT(2)	(Not used)
346	---	TRACEPKT(3)	(Not used)
347	---	TRACEPKT(4)	(Not used)
348	---	TRACEPKT(5)	(Not used)
349	---	TRACEPKT(6)	(Not used)
350	---	TRACEPKT(7)	(Not used)
351	---	PIPESTAT(0)	(Not used)
352	---	PIPESTAT(1)	(Not used)
353	---	PIPESTAT(2)	(Not used)
354	---	A15	(Not used)
355	---	VSS	Ground
356	I	SD_VDD25	+2.5V
357	---	SD_VSS	Ground
358	I	SD_VDD15	+1.5V
359	---	VSS	Ground
360	---	RTCK	(Not used)
361	I	XTRST	Reset:Low
362	---	NC	(Not used)
363	---	NC	(Not used)
364	---	NC	(Not used)

MAIN IV SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LINK TO VOLTAGE CHART

LSJB8330

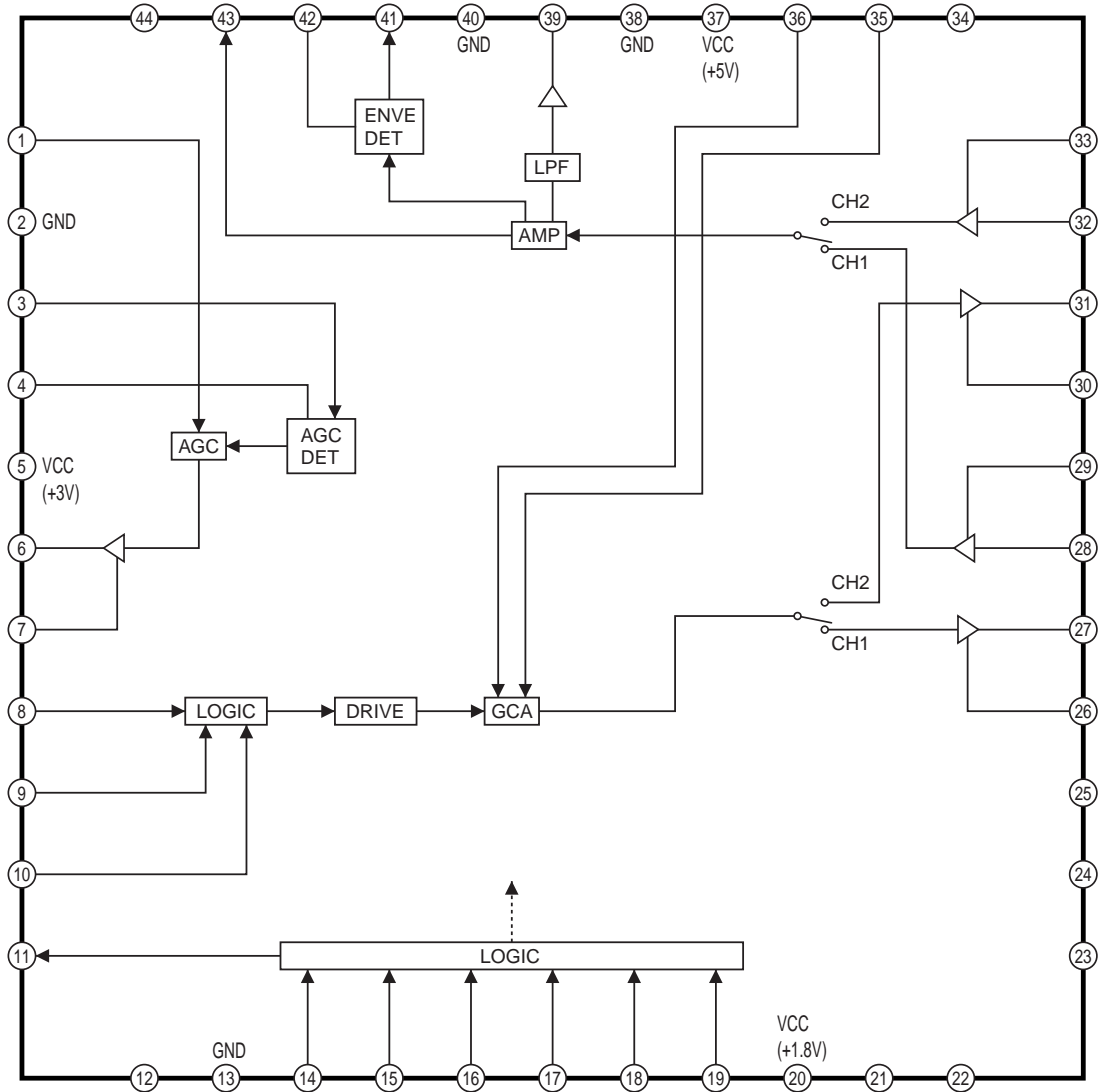
MAIN IV SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

I/O CHART OF IC3201

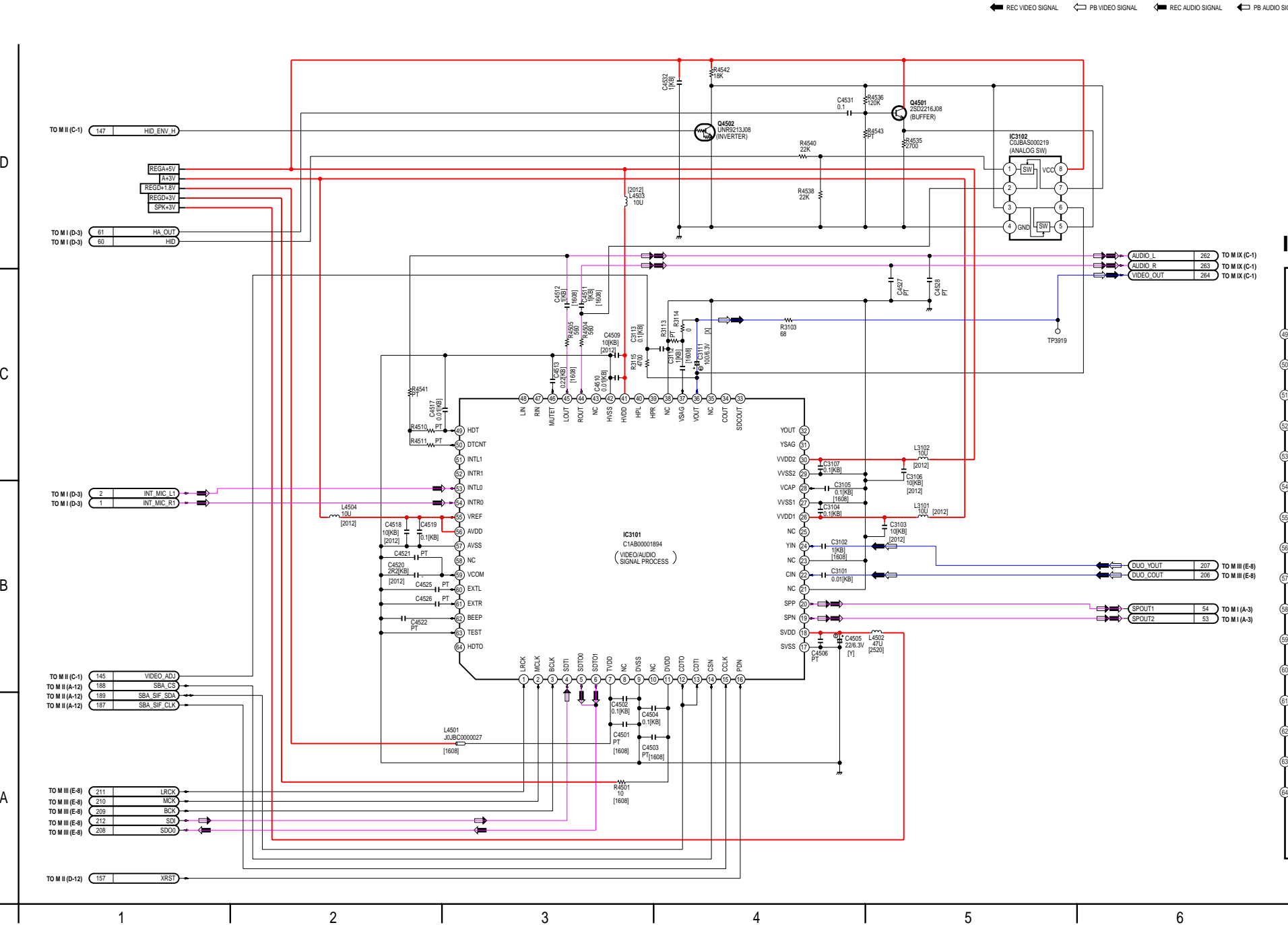
Pin No.	I/O	Signal Name	Description
1	-	DVSS	Ground
2	-	VRH	V-ref : high
3	-	VRL	V-ref : low
4	I	AVD12 (ADC1)	+1.8V
5	-	ADTEST	Test pin
6	-	AVS12 (ADC1/2)	Ground
7	I	AVD14 (AMP1)	+1.8V
8	-	AVS14 (AMP1)	Ground
9	I	PBIN	PB data input (+)
10	I	AVD15 (ADC2)	+1.8V
11	I	ATFIN	ATF input
12	-	AVS15 (ADC2)	Ground
13	I	AVD13 (ADC1/2)	+1.8V
14	-	AVS13 (ADC1/2)	Ground
15	I	AVD16 (VREF)	+1.8V
16	-	VCORP	VCO reference resister
17	-	AVS16 (VREF)	Ground
18	-	AVS22 (DAC2/3)	Ground
19	O	OSO	Offset output
20	-	VREF3	V-ref3
21	-	VREF2	V-ref2
22	I	AVD22 (DAC2/3)	+1.8V
23	O	ATF0	ATF output
24	-	VREF1	V-ref1
25	O	FPORP	Frequency Phase out (+)
26	-	AVS21 (DAC1)	Ground
27	I	AVD21 (DAC1)	+1.8V
28	-	FRP	(Not used)
29	I	VCOIN	VCO input
30	-	AVS11 (VCO)	Ground
31	I	AVD11 (VCO)	+1.8V
32	I	DVDD25	+2.5V
33	O	AGCCTL	AGC control
34	O	RECCUR	Rec current control
35	O	CAPERR	Capstan error
36	O	CYLERR	Cylinder error
37	O	CAPRSF	Capstan motor Reverse(H)/Stop(M)/Forward(L)
38	-	DVSS	Ground
39	I	TRST	Reset : low
40	I	TMS	Test mode of JTAG
41	I	TDI	Test data out of JTAG
42	O	TDO	Test data In of JTAG
43	I	TCK	Test clock of JTAG
44	O	HID1	Head switch pulse 1
45	O	HID2	Head switch pulse 2
46	O	SPA	Sample pulse for ATF
47	-	DVSS	Ground
48	O	RECI	Rec on/off control
49	I	EQHLD	Equalizer hold
50	O	HSE	Rec data
51	O	RECCLK	Rec clock
52	I	DVDD18	+1.8V
53	O	RECCTL	Rec control
54	O	PBH	PB mode : high
55	I	CYLFG	Cylinder FG head
56	O	DriveCLK	Drive clock

Pin No.	I/O	Signal Name	Description
57	-	DVSS	Ground
58	I	CYLPG	Cylinder PG head
59	-	ADM[0]	(Not used)
60	-	ADM[1]	(Not used)
61	I/O	ADM[2]	Address/data 2
62	I	ADD18	+1.8V
63	I/O	ADM[3]	Address/data 3
64	I/O	ADM[4]	Address/data 4
65	I/O	ADM[5]	Address/data 5
66	-	DVSS	Ground
67	I/O	ADM[6]	Address/data 6
68	I/O	ADM[7]	Address/data 7
69	I/O	ADM[8]	Address/data 8
70	I	DVDD18	+1.8V
71	I/O	ADM[9]	Address/data 9
72	I/O	ADM[10]	Address/data 10
73	I/O	ADM[11]	Address/data 11
74	I/O	ADM[12]	Address/data 12
75	-	DVSS	Ground
76	I/O	ADM[13]	Address/data 13
77	I/O	ADM[14]	Address/data 14
78	I/O	ADM[15]	Address/data 15
79	I	AS	Address strobe
80	I	DVDD18	+1.8V
81	I	XRE	Read enable
82	I	XWEL	Write enable
83	I	XWEH	Write enable
84	I	CLK27A	27MHz clock
85	-	DVSS	Ground
86	I/O	DVR[0]	Digital Rec/PB data (0)
87	I/O	DVR[1]	Digital Rec/PB data (1)
88	I/O	DVR[2]	Digital Rec/PB data (2)
89	I/O	DVR[3]	Digital Rec/PB data (3)
90	I	DVDD18	+1.8V
91	O	REQR	Request of R10
92	I	ACKR	Acknowledge for R10
93	-	TSTCKI	(Not used)
94	-	DVSS	Ground
95	-	TSTD1[0]	(Not used)
96	-	TSTD1[1]	(Not used)
97	-	TSTD1[2]	(Not used)
98	I	DVDD18	+1.8V
99	-	TSTD1[3]	(Not used)
100	-	TSTD1[4]	(Not used)
101	-	TSTD1[5]	(Not used)
102	-	TSTD1[6]	(Not used)
103	-	DVSS	Ground
104	-	TSTD1[7]	(Not used)
105	-	TSTD1[8]	(Not used)
106	-	TSTD1[9]	(Not used)
107	I	VPD	+1.8V
108	I	DVDD18	+1.8V
109	I	XRST	Reset : low
110	-	TSTMD	(Not used)
111	-	CS	(Not used)
112	-	GESW	(Not used)

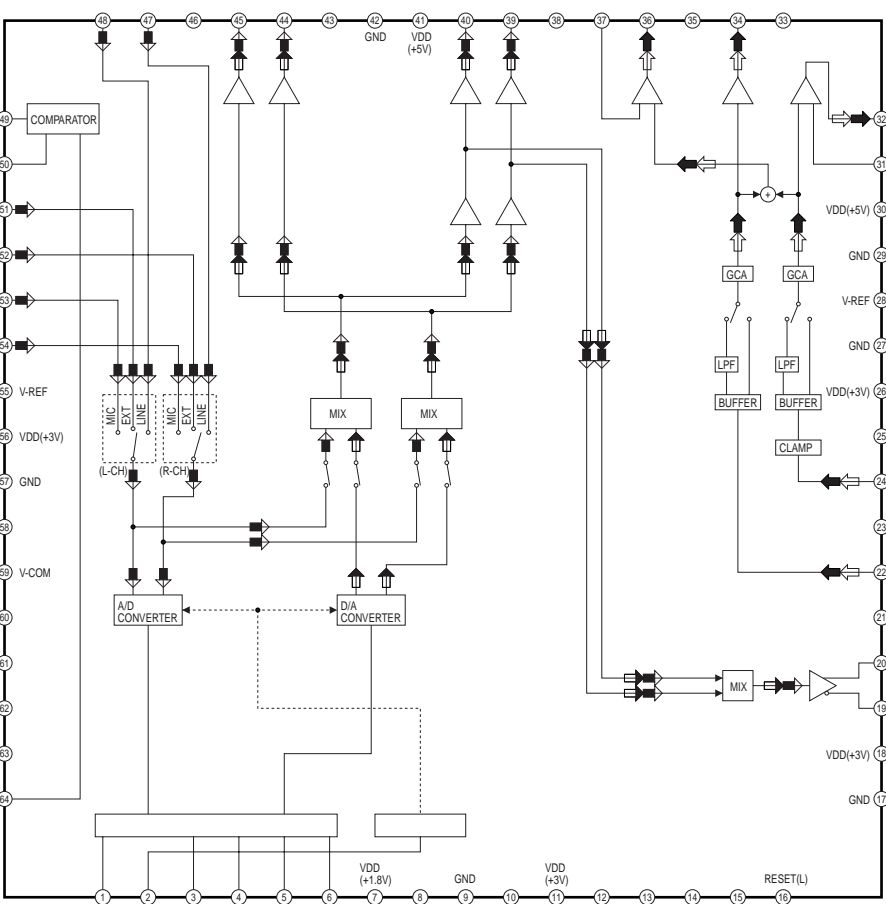
IC5001 IC- DETAIL BLOCK DIAGRAM



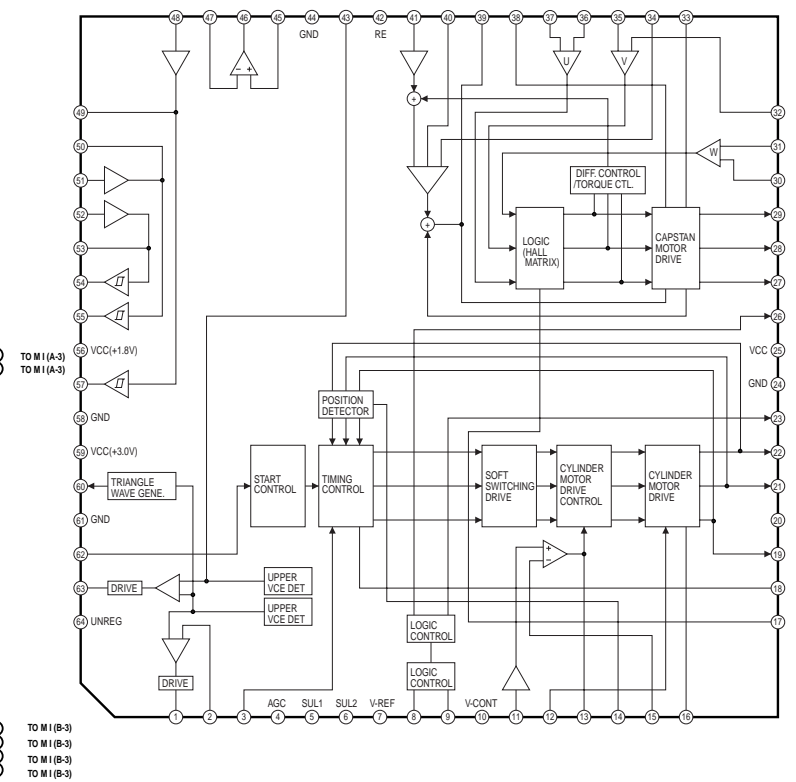
MAIN V SCHEMATIC DIAGRAM



IC3101 IC- DETAIL BLOCK DIAGRAM

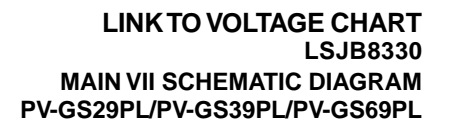


NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

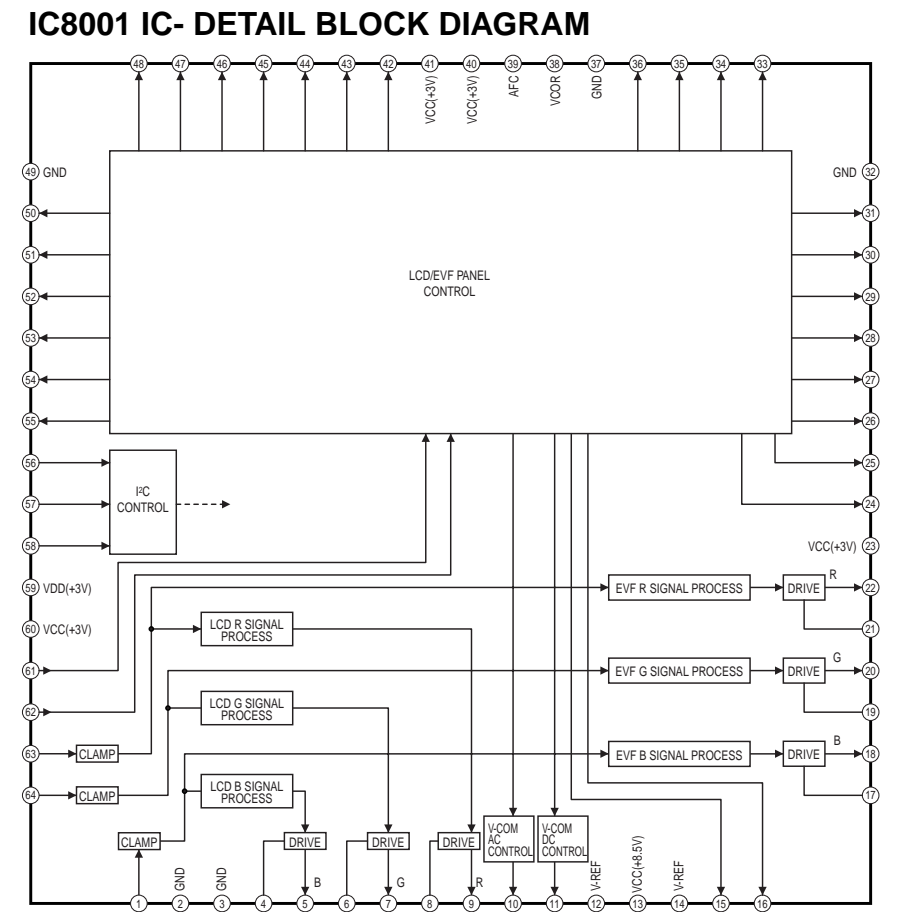


LINK TO VOLTAGE CHART
LSJB8330
MAIN VI SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

NOTE:
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REFER TO BEGINNING OF SCHEMATIC SECTION.



NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
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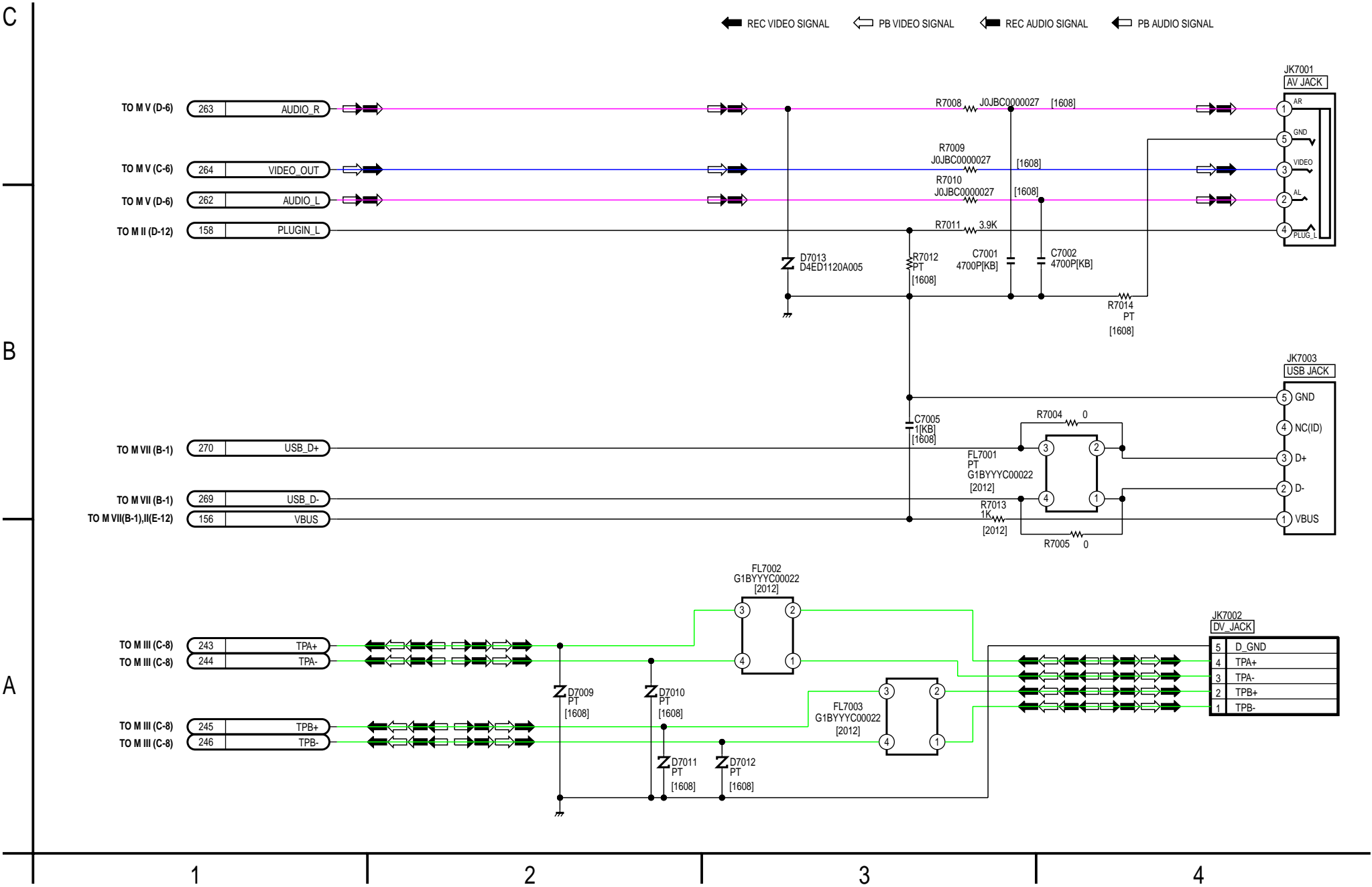
LINK TO VOLTAGE CHART
LSJB8330
MAIN VIII SCHEMATIC DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN IX SCHEMATIC DIAGRAM

NOTE: For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.


NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



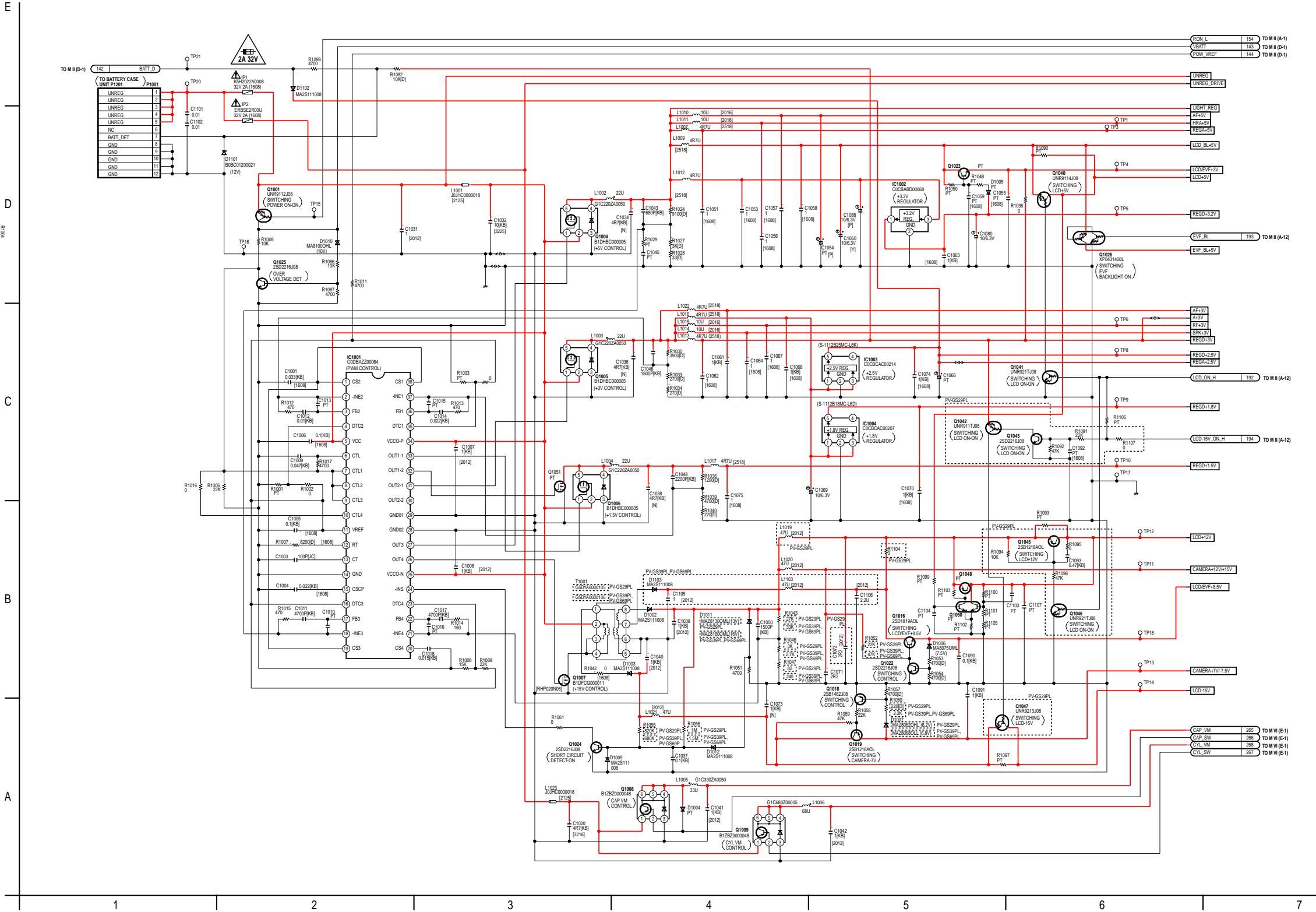
MAIN X SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 2A 32V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÊME TYPE 2A 32V


IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

NOTE: FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.



1. Important safety notice

Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.

2. Do not use the part numbers shown on these drawings for ordering.

The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.


3. Use only original replacement parts:

To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.

However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information

 : Test point with no test pin.

Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes

The Zener Voltages of Zener Diodes are indicated as such on Schematic Diagrams.

Example:

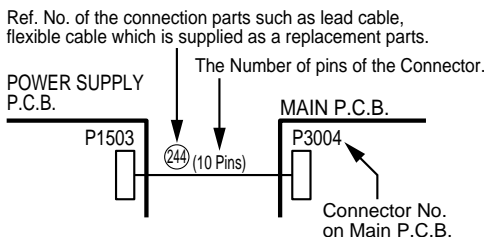
(6.2V).....Zener Voltage

2. How to identify Connectors

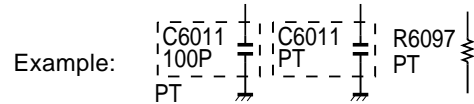
Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to (its counter part). Use the interconnection schematic diagram to find the connection between associated connectors.

Example:

The connections between two P.C.B.s are shown below.

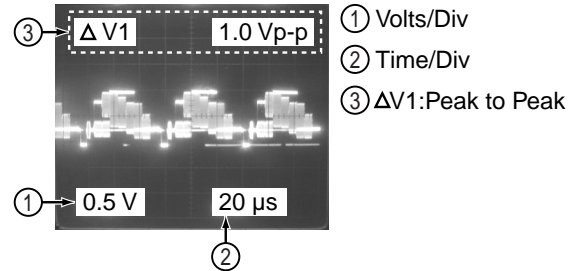


3. Parts marked "PT" are not used in any models included in this service model.



Signal Waveform Note

How to read Signal Waveform



Voltage Chart Note

Voltage Measurement

- Color bar signal in SP mode.
- : Unmeasurable or not necessary to measure.

Circuit Board Layout Note

Circuit Board Layouts show components installed for various models.

For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:

Circuit Board Layouts include components which are not used.

MAIN PARTS PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑦	Bottom Case Unit	①	3(433), 2(519), 3(537)	1
2	⑤⑩	Top Unit	①	3(433), (519)	2
3	-	Side R Ass'y	①	3(433), B1, FP8	3
4	-	R Shaft Case Unit & LCD Ass'y	①	2(533), 3(537)	4
5	-	Lens Ass'y	①	2(537), FP301, FP701	5
6	⑫	EVF Unit	①	(537), FP9902	6
	⑫⑩	Camera P.C.B.			
7	⑫⑥	Battery Case Unit	①	2(540), FP10, P1001 2(433)	7
	⑫⑦	Rear Unit			
8	⑤①	Front Case Unit	①	2(433), (519), FP6	8
9	②	Cassette Cover Unit	①	3(519), FP7001	9
10	⑫⑩	Main P.C.B.	①	2(545), FP1, FP2, FP3, FP4, FP5	10
11	-	Mechanism Chassis Ass'y	①	3(441), (24)	11

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How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.


D: Section No.

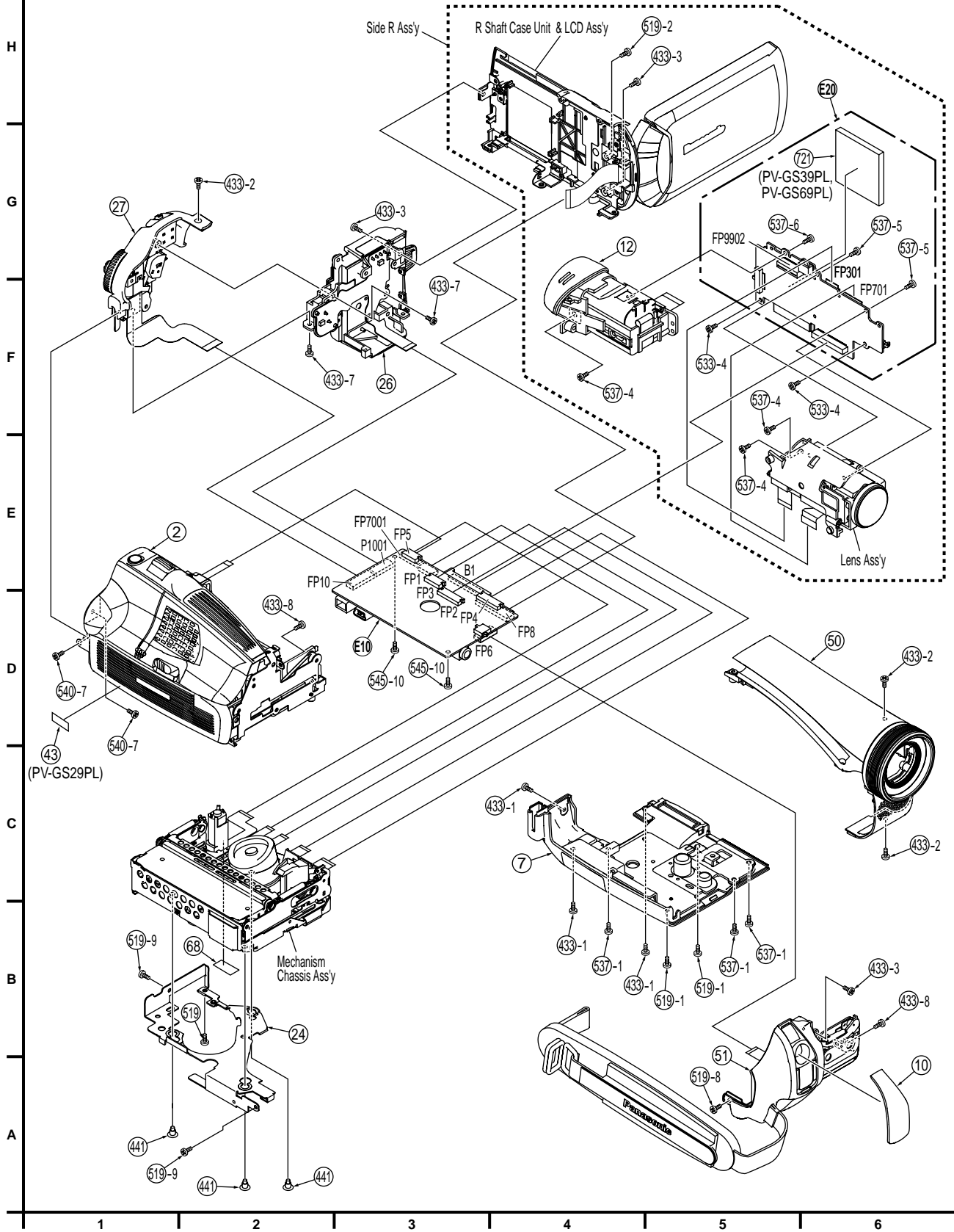
E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

F: Refer to "Notes in chart."

1

Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly and Assembly Instructions" section.



FRONT CASE PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	ⓔ30	Front P.C.B.	2	5(533)	11
2	ⓔ52	LED Light Lens	2	-----	11
3	ⓔ56	Front Case	2	-----	-

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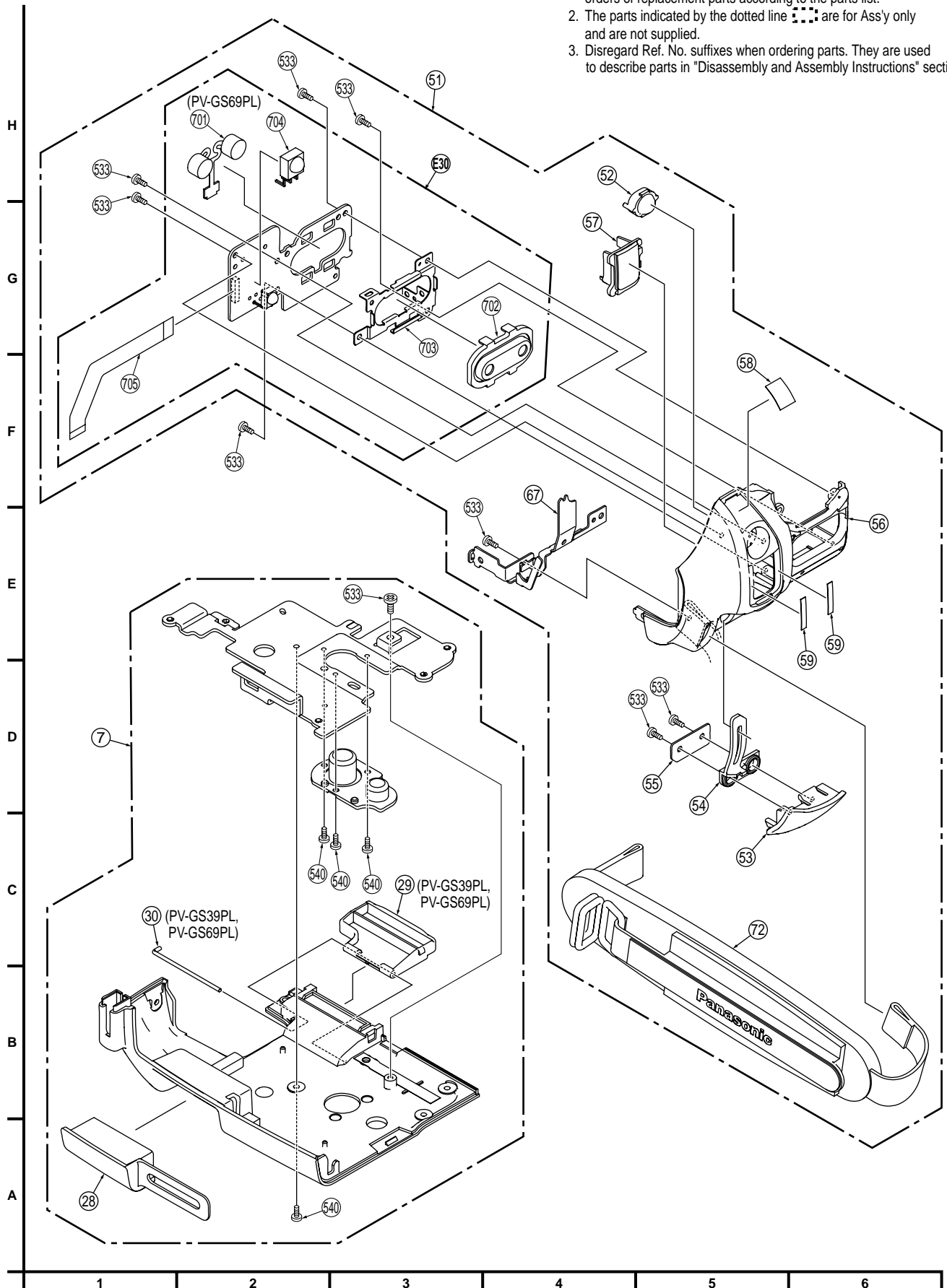
How to read chart shown above:

- A: Order of Procedure steps.
When reassembling, perform steps(s) in reverse order.
- B: Ref No.
- C: Part to be removed or installed.
- D: Section No.
- E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.
- F: Refer to "Notes in chart."

② FRONT AND BOTTOM CASE SECTION

Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly and Assembly Instructions" section.



R SHAFT CASE & LCD PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	③③	LCD Case A Unit	③	2(519), 8(L-1)	12
2	③①	R Shaft Case Unit	③	FP8101	12
3	④④	LCD Backlight P.C.B	③	(533), (L-2), FP8102	13
4	③④	LCD Case B	③	4(L-3)	13
5	-	LCD Panel Ass'y	③	7(L-4)	13
	③⑤	LCD Shield Case Unit			

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	④②	LCD Panel	③	-----	14
2	③⑨	Reflect Sheet	③	(L-5)	14
3	③⑦	Lead Light Panel	③	-----	14
4	③⑧	Diffusion Sheet	③	-----	14
5	④①	BEF Sheet	③	-----	14
6	④①	BEF Sheet A	③	-----	14
7	③⑥	Panel Holder Unit	③	-----	14

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.


D: Section No.

E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

F: Refer to "Notes in chart."

③ R SHAFT CASE UNIT AND LCD SECTION (Model: PV-GS29PL)

Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly and Assembly Instructions" section.

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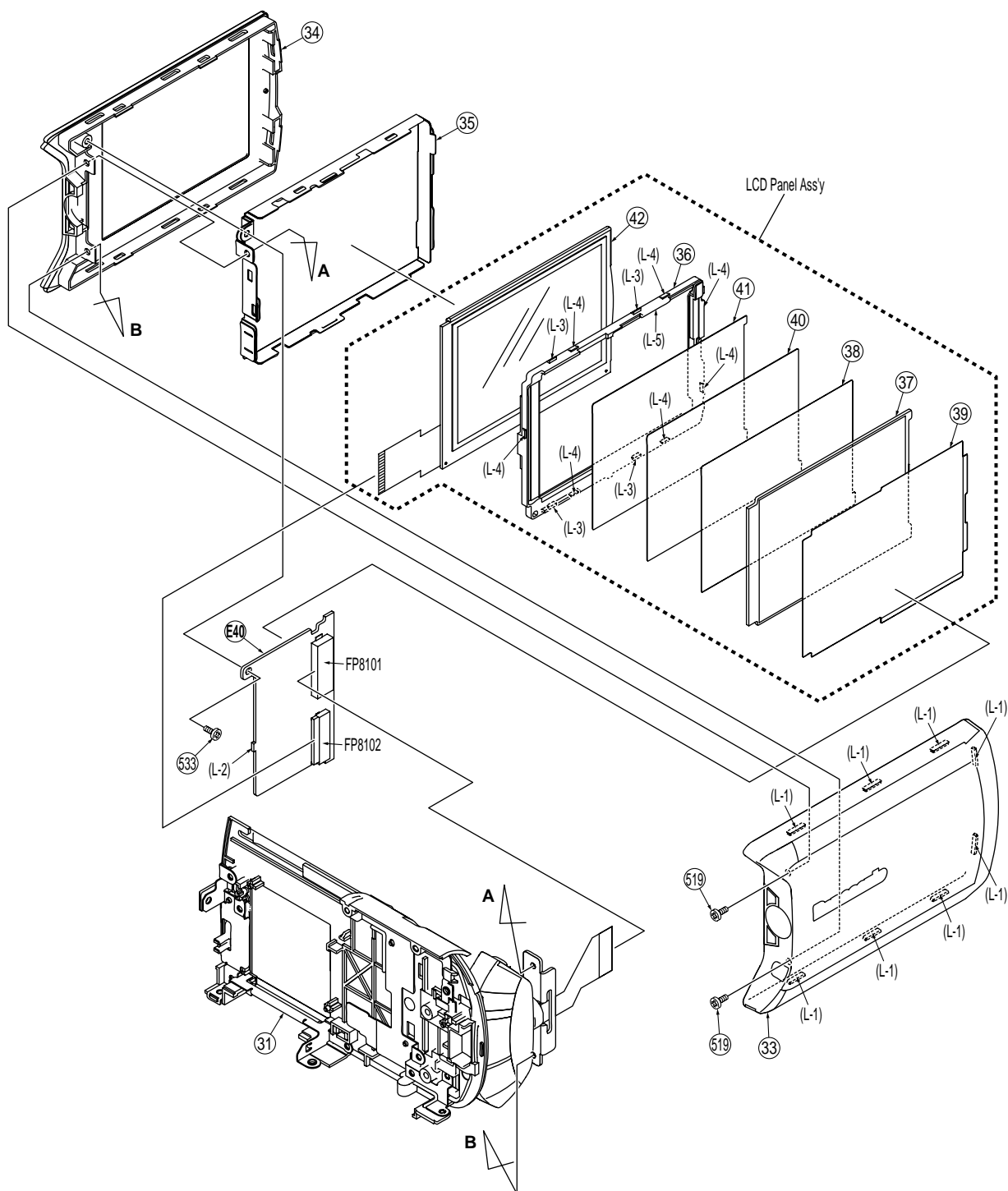
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(For models with Wide LCD Monitor)

R SHAFT CASE & LCD PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	③③	LCD Case A Unit	③	2(519), 8(L-1)	12
2	③①	R Shaft Case Unit	③	FP8101	12
3	④④	LCD Backlight P.C.B	③	(533), 3(L-2), FP8102	13
4	③④	LCD Case B	③	4(L-3)	13
5	-	LCD Panel Ass'y	③	6(L-4)	13
	③⑤	LCD Shield Case Unit			

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	④②	LCD Panel	③	-----	14
2	③⑨	Reflect Sheet	③	-----	14
3	③⑦	Lead Light Panel	③	-----	14
4	③⑧	Diffusion Sheet	③	-----	14
5	④①	BEF Sheet	③	-----	14
6	④①	BEF Sheet A	③	-----	14
7	③⑥	Panel Holder Unit	③	-----	14

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.


D: Section No.

E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

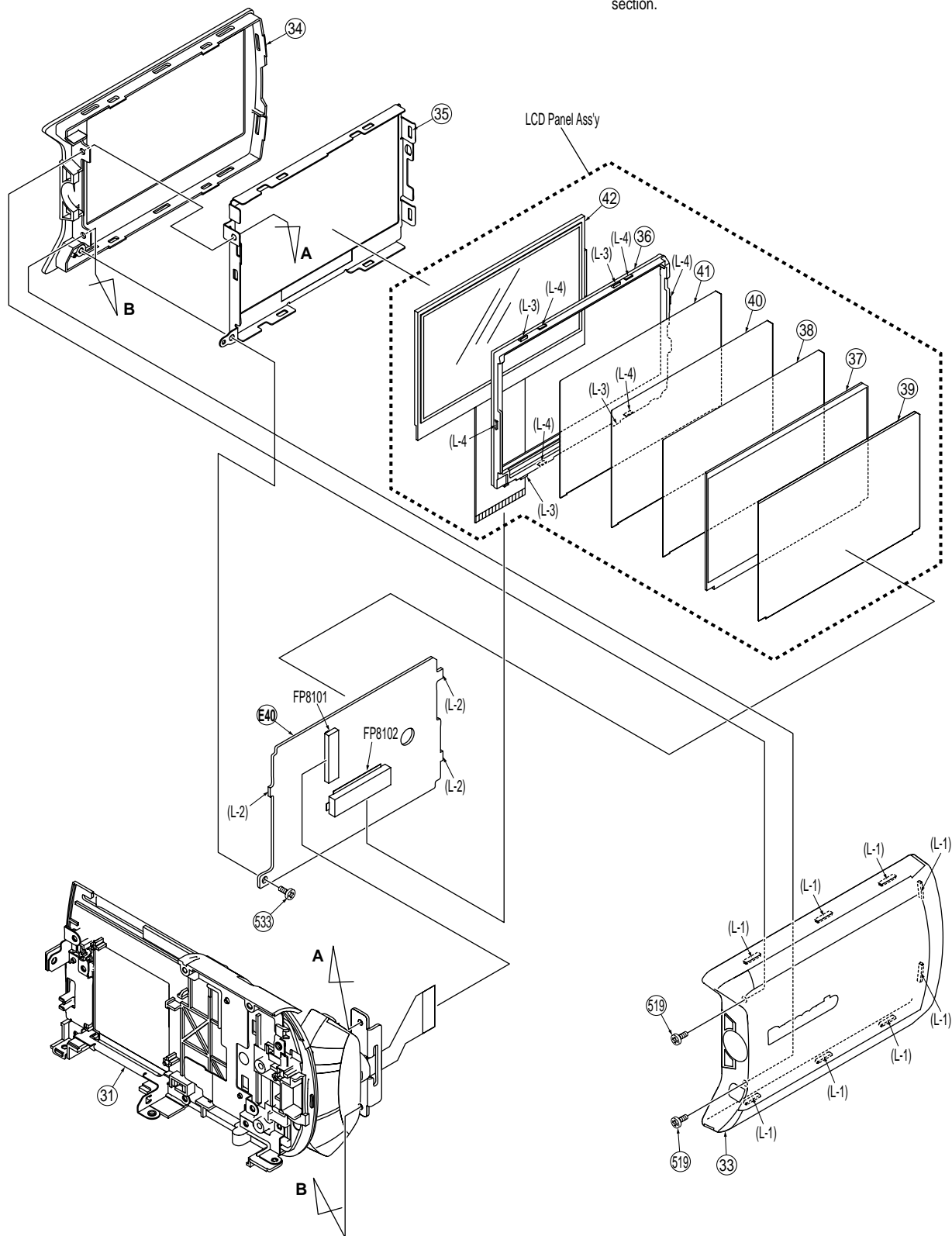
F: Refer to "Notes in chart."

③ R SHAFT CASE UNIT AND LCD SECTION (Models: PV-GS39PL, PV-GS69PL)

Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly and Assembly Instructions" section.

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CCD & LENS PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑤0	CCD P.C.B	4	2(536)	15
2	⑥4	Filter Rubber	4	-----	15
3	⑥3	Optical Filter	4	-----	15

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑨	Lens Cover	4	2(537)	-
2	⑥5	Zoom Motor Unit	4	2(538), Unsolder	16
3	⑥6	Focus Motor Unit	4	2(538), Unsolder	16

↑ A ↑ B ↑ C ↑ D ↑ E ↑ F

How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.


D: Section No.

E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

F: Refer to "Notes in chart."



4 CCD AND LENS SECTION

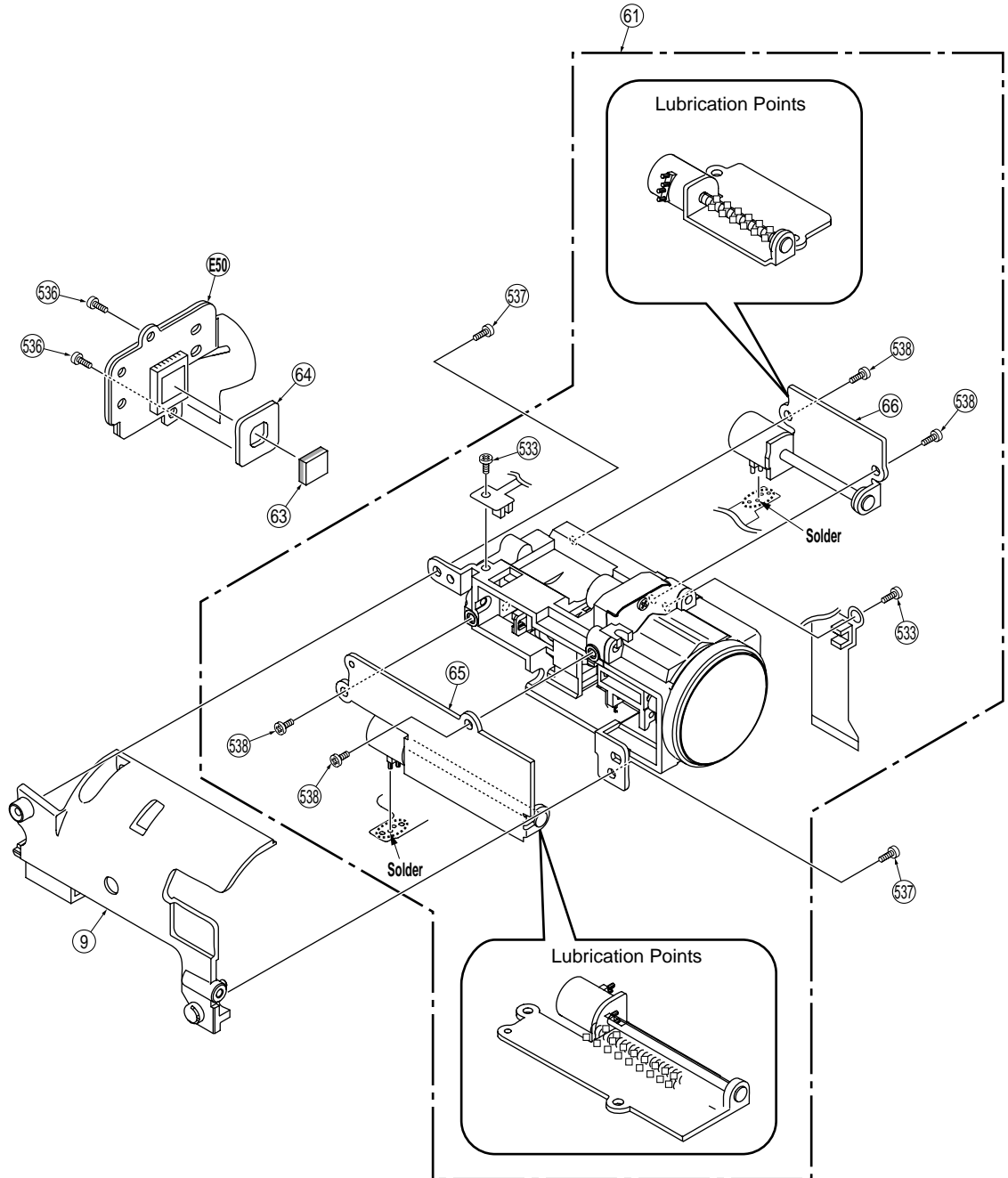
Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly and Assembly Instructions" section.

LUBRICATION POINTS

When the marked parts are replaced, apply the recommended lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
 	Grease	Available from Factory	LSUQ0050



EVF PORTION

STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑰	EVF Frame	⑤	2(537)	17
2	⑰	EVF Slide Piece	⑤	2(450)	17
3	⑬ ⑮	EVF Base Frame EVF Earth Plate	⑤	2(L-1)	17
4	⑭	EVF Spring	⑤	(450), (L-2)	18
5	⑰	EVF F.P.C.	⑤	FP951	18

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STEP No.	Ref. No.	PART	Section No.	REMOVE	NOTE
1	⑱	Eye Cap	⑤	2(524)	19
2	⑳	EVF Lens Unit	⑤	-----	20
3	㉒	Eye Sight Lever	⑤	-----	20

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How to read chart shown above:

A: Order of Procedure steps.

When reassembling, perform steps(s) in reverse order.

B: Ref No.

C: Part to be removed or installed.


D: Section No.

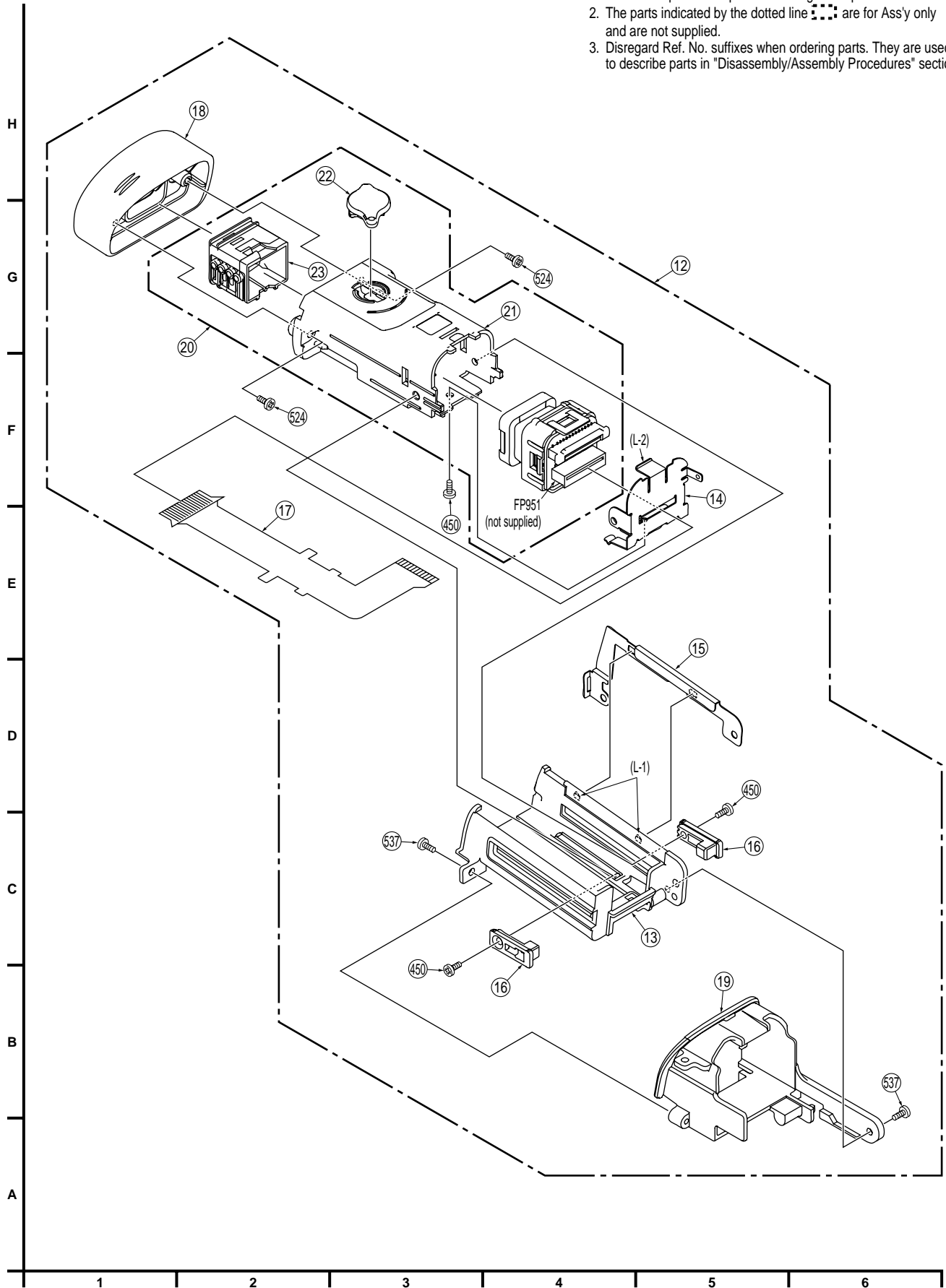
E: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.

F: Refer to "Notes in chart."

5 EVF SECTION

Note:

1. Parts with no Ref. No. in "EXPLODED VIEW" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.
2. The parts indicated by the dotted line  are for Ass'y only and are not supplied.
3. Disregard Ref. No. suffixes when ordering parts. They are used to describe parts in "Disassembly/Assembly Procedures" section.



Notes in chart

1. Removal of Bottom Case Unit

- 1) Remove the 8 Screws (433, 519, 537)
- 2) Release the Hand Strap from the plate and remove the Bottom Case Unit.

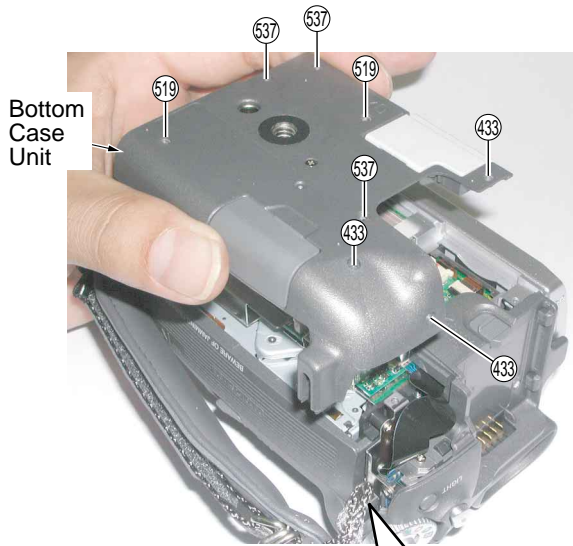
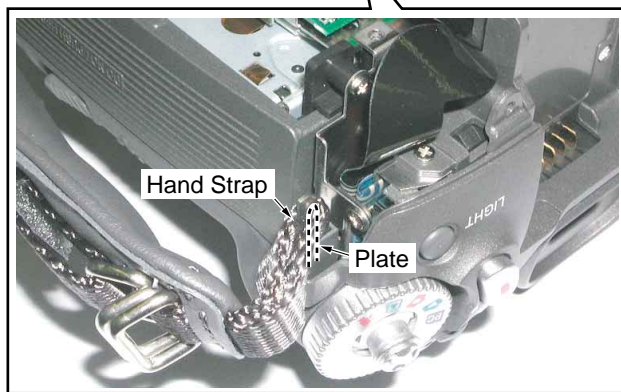
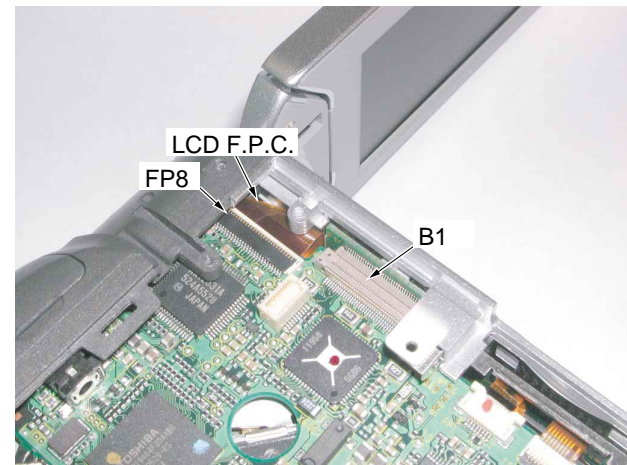
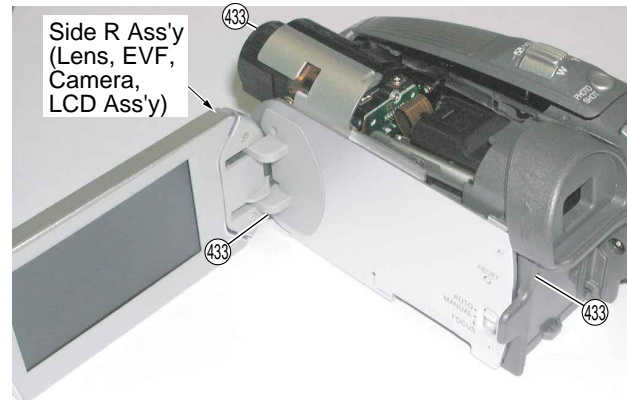


Fig. D1



3. Removal of Side R Ass'y

- 1) Remove the 3 Screws (433).
- 2) Disconnect the F.P.C. from Connector FP8.
- 3) Remove the Side R Ass'y (Connector B1 is disconnected).



<Bottom View>

Fig. D3

2. Removal of Top Unit

- 1) Open the LCD and remove the 4 Screws (433, 519).
- 2) Pull and slide the Top Unit carefully.

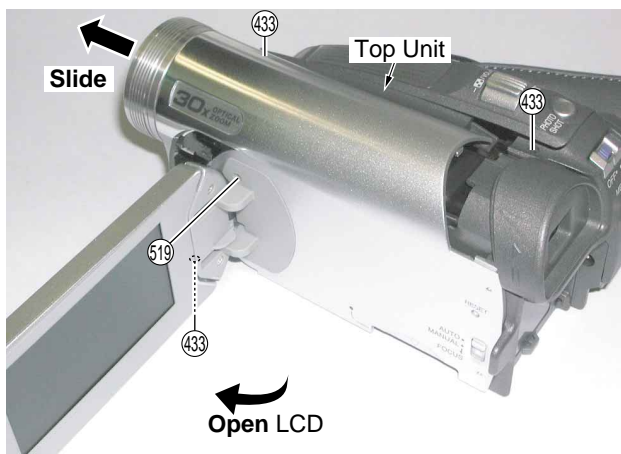


Fig. D2

4. Removal of R Shaft Case Unit & LCD Ass'y

Take care not to damage the LCD open/close Switch.

- 1) Remove the 5 Screws (533, 537), and remove the R Shaft Case Unit & LCD Ass'y.

Installation of R Shaft Case Unit & LCD Ass'y

- 1) Install the R Shaft Case Unit & LCD Ass'y so that the tab is inserted into slot.
- 2) Tighten 5 Screws (533, 537).

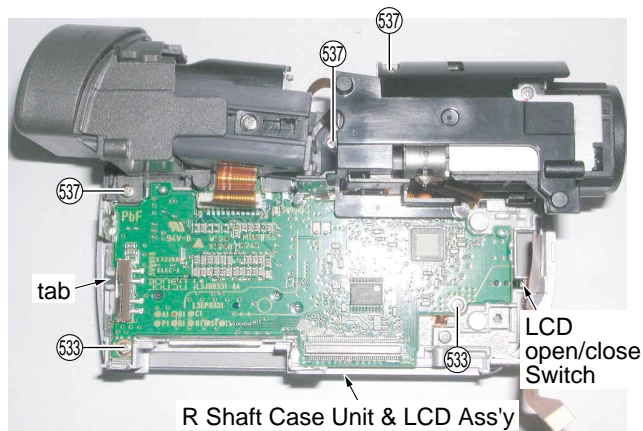


Fig. D4

5. Installation of Lens Ass'y

Take care not to damage the motor leads.

- 1) Install the Lens Ass'y with the 3 bosses and 2 Screws (537).
- 2) Connect the F.P.C.s to Connector FP701 and FP301, then place the sheet on Connector FP301.

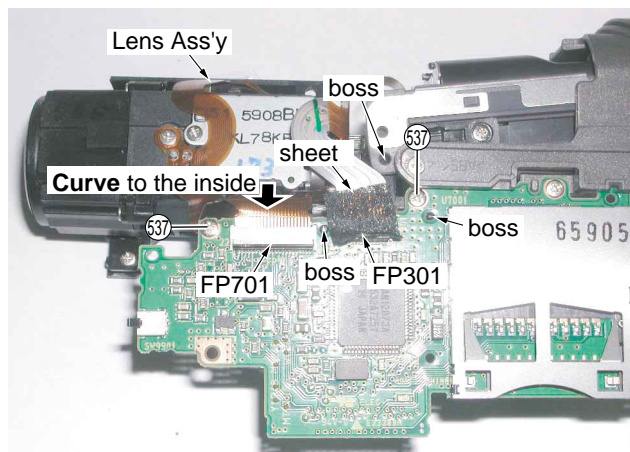
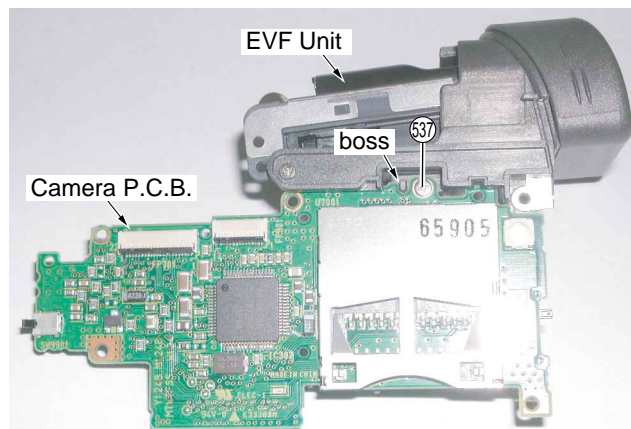


Fig. D5

6. Installation of EVF Unit, Camera P.C.B.

Take care not to damage the EVF standby Switch.

- 1) Install the EVF Unit with the boss and Screw (537).
- 2) Connect the F.P.C. to Connector FP9902.



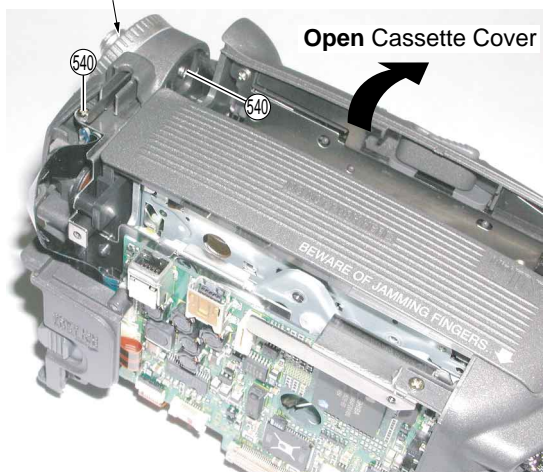
<Foil Side>

Fig. D6

7. Removal of Battery Case Unit & Rear Unit

- 1) Open the Cassette Cover and remove the 2 Screws (540).
- 2) Disconnect the F.P.C.s from Connectors FP10 and P1001.

Battery Case Unit
& Rear Unit



Installation of Battery Case Unit, Rear Unit

- 1) Remove the 2 Screws (433).

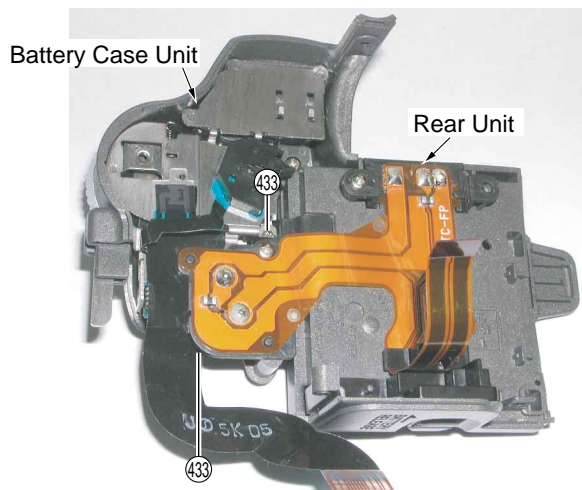
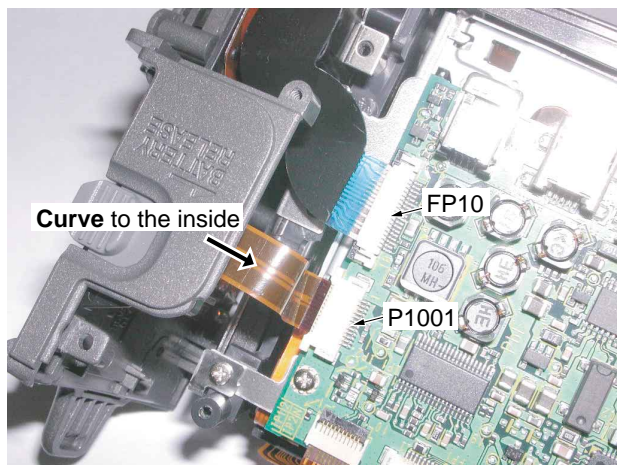


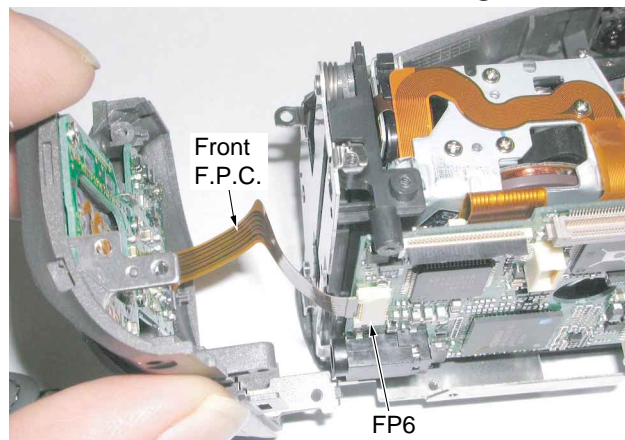
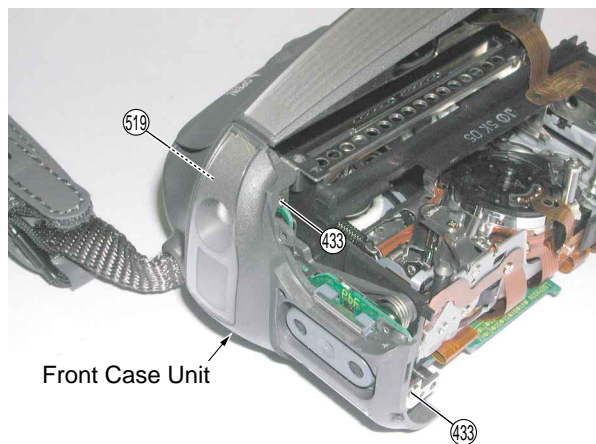
Fig. D8

8. Removal of Front Case Unit

- 1) Remove the 3 Screws (433, 519).
- 2) Disconnect the Front F.P.C. from Connector FP6.



<Bottom View>
Fig. D7



<Bottom View>

Fig. D9

9. Removal of Cassette Cover Unit

- 1) Remove the 3 Screws (519).
- 2) Disconnect the F.P.C. from Connector FP7001.
- 3) Pull off the Mechanism Ass'y & Main P.C.B.

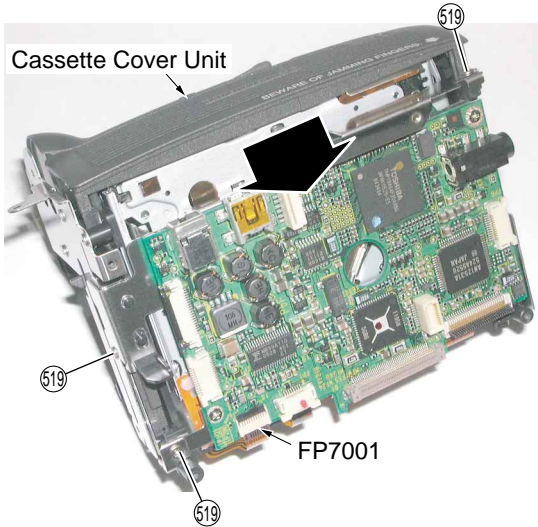
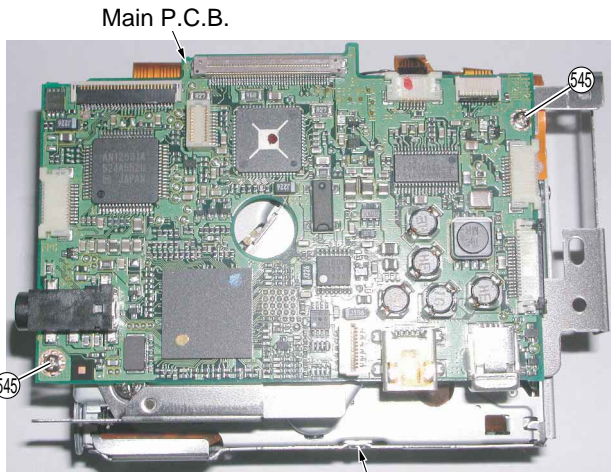


Fig. D10

10. Installation of Main P.C.B.

Take care not to damage the F.P.C.s.

- 1) Connect the F.P.C.s to the connectors on the Main P.C.B., verifying that the direction of the Flexible Cables is correct. Refer to "REMOVAL/INSTALLATION OF F.P.C. FROM NON ZIF (Zero Insertion Force) CONNECTOR."
- 2) Tighten the 2 Screws (545).
- 3) After installing the Main P.C.B, confirm the F.P.C.s are positioned as shown.



Mechanism Chassis Ass'y

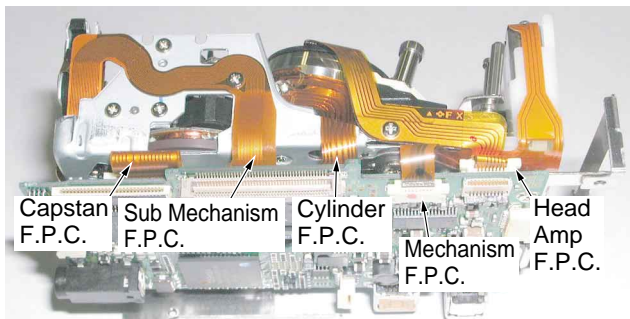


Fig. D11-1

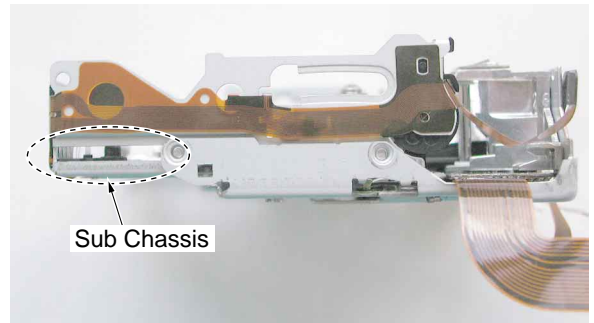
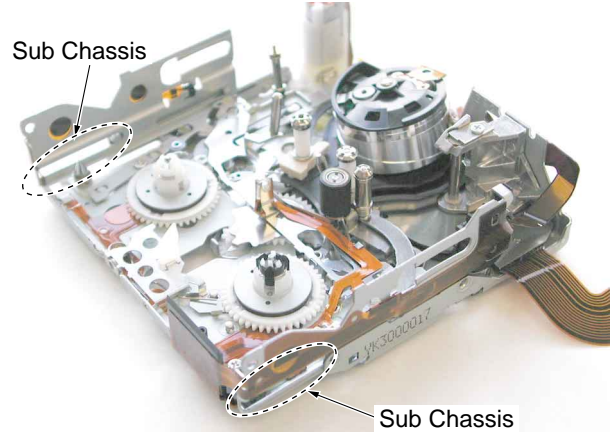
Replacement of Mechanism Chassis Ass'y

When replacing the Main Chassis Ass'y or the Cylinder Unit, be sure to perform the Envelope Output Adjustment. Refer to "ENVELOPE OUTPUT ADJUSTMENT" in MECHANICAL ADJUSTMENT.

Mechanism Chassis Ass'y Handling Caution

When servicing the Mechanism Chassis Ass'y without the Cassette Up Unit, do not handle the Sub Chassis of the Mechanism Chassis Ass'y.

Mechanism Chassis Ass'y
(without Cassette Up Unit)



<Side View>
Fig. D11-2

11. **Installation of Front P.C.B.**
 - 1) Install the LED Light Lens into the Front Case Unit.
 - 2) Install the Front P.C.B. with the 7 bosses and the 5 Screws (533).

11. **Installation of Front P.C.B.**
 - 1) Install the LED Light Lens into the Front Case Unit.
 - 2) Install the Front P.C.B. with the 7 bosses and the 5 Screws (533).

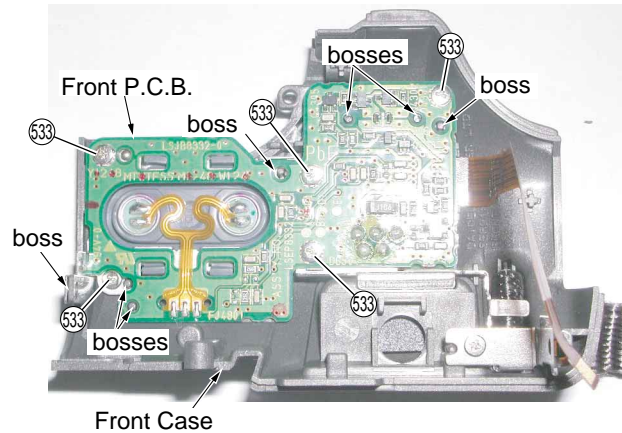


Fig. D12

- 12. Removal of R Shaft Case Unit, LCD Case A Unit**
 - 1) Open and rotate the LCD to access the 2 Screws (519) as shown below.
 - 2) Release the 8 Locking Tabs (L-1) and remove the LCD Case A Unit.
 - 3) Disconnect the F.P.C. from Connector FP8101.
 - 4) Remove the R Shaft Case Unit.

- 12. Removal of R Shaft Case Unit, LCD Case A Unit**
 - 1) Open and rotate the LCD to access the 2 Screws (519) as shown below.
 - 2) Release the 8 Locking Tabs (L-1) and remove the LCD Case A Unit.
 - 3) Disconnect the F.P.C. from Connector FP8101.
 - 4) Remove the R Shaft Case Unit.

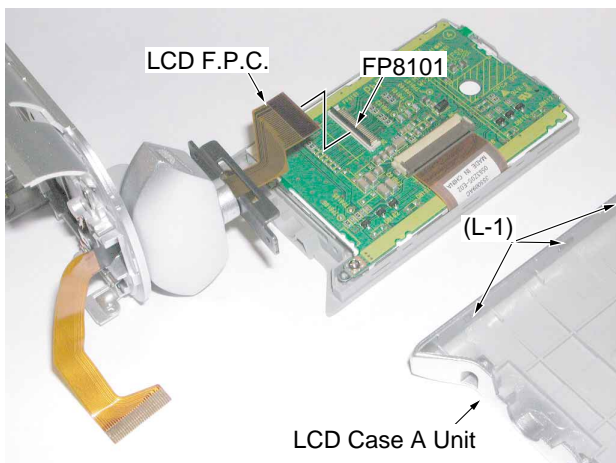
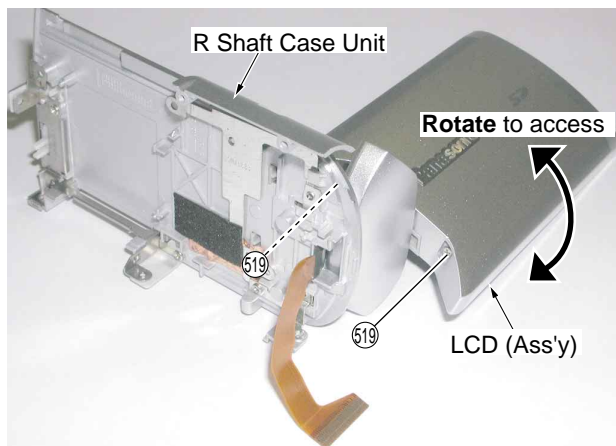


Fig. D13

13. Installation of LCD Backlight P.C.B., LCD Panel Ass'y, LCD Shield Case Unit and LCD Case B

Use extreme care regarding LEDs when handling the LCD Backlight P.C.B.

Install in order shown below.

- 1) Install the LCD Panel Ass'y onto the LCD Shield Case Unit with the 7 Locking Tabs (L-4) while carefully bending the LCD F.P.C. at its base so as not to damage it.
- 2) Install the LCD Shield Case into the LCD Case B with the 4 Locking Tabs (L-3).
- 3) Install the LCD Backlight P.C.B. onto the LCD Panel Ass'y with the Locking Tab (L-2).
- 4) Tighten the Screw (533) while keeping the LCD Backlight P.C.B. pressed toward the right. Then, connect the F.P.C. to Connector FP8102.

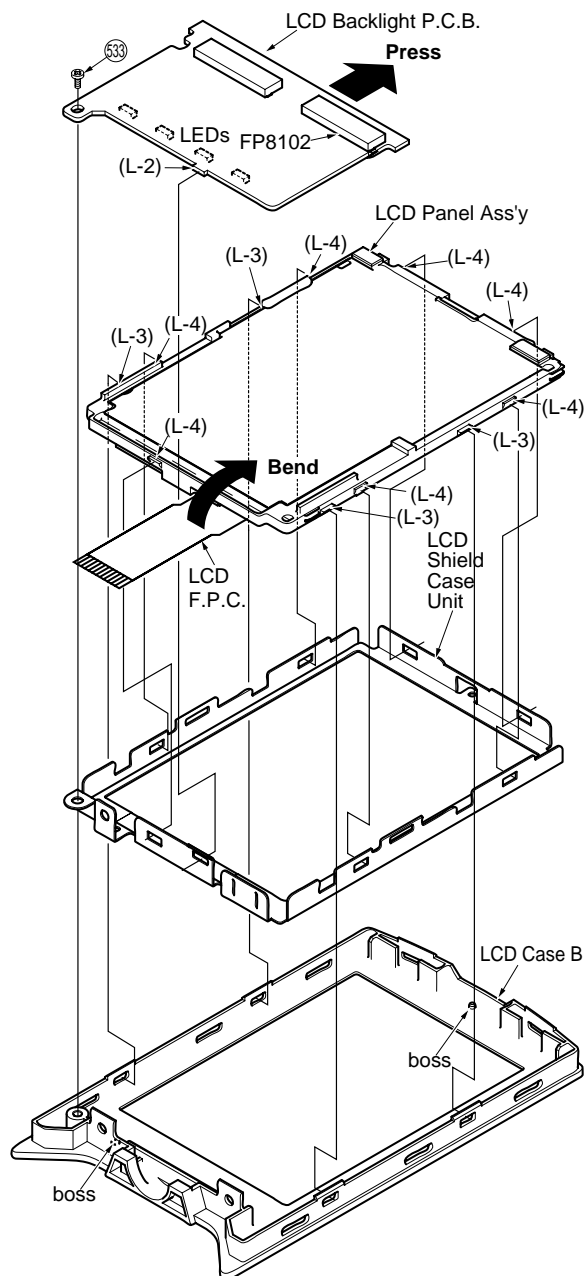


Fig. D14a

(For models with Wide LCD Monitor) Installation of LCD Backlight P.C.B., LCD Panel Ass'y, LCD Shield Case Unit and LCD Case B

Use extreme care regarding LEDs when handling the LCD Backlight P.C.B.

Install in order shown below.

- 1) Install the LCD Panel Ass'y onto the LCD Shield Case Unit with the 6 Locking Tabs (L-4).
- 2) Install the LCD Backlight P.C.B. onto the LCD Panel Ass'y with the 3 Locking Tabs (L-2). Then, connect the F.P.C. to Connector FP8102.
- 3) Install the LCD Case B with the 4 Locking Tabs (L-3).
- 4) Tighten Screw (533) while keeping the LCD Backlight P.C.B. pressed toward the left.

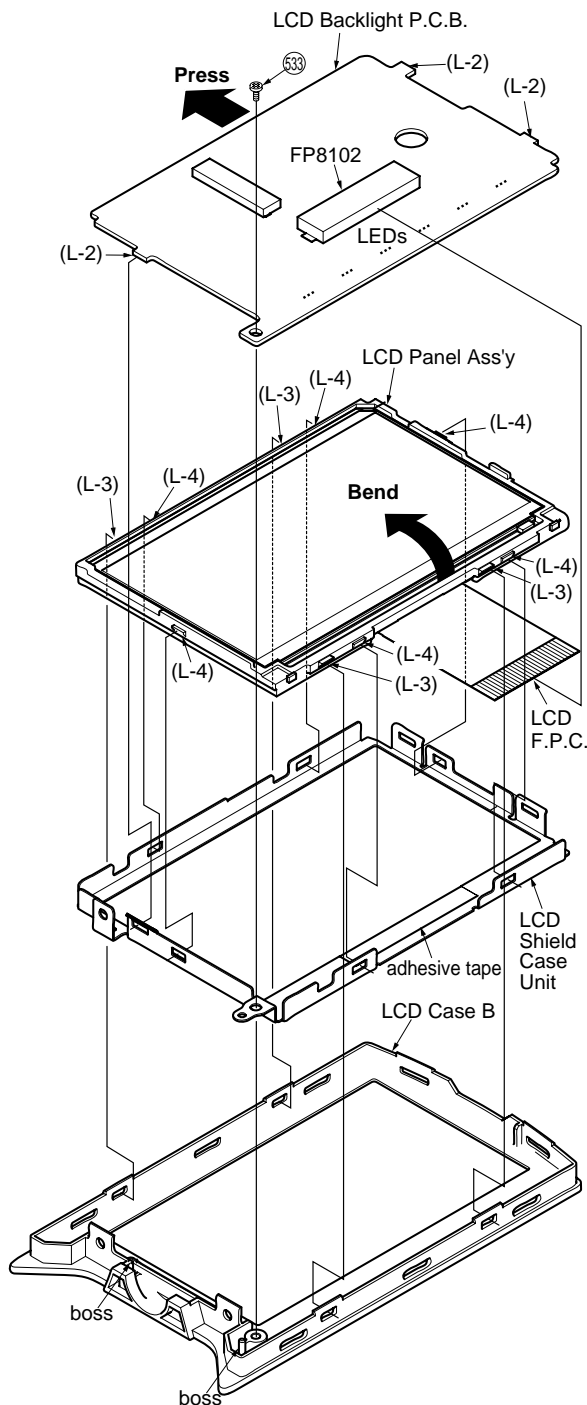


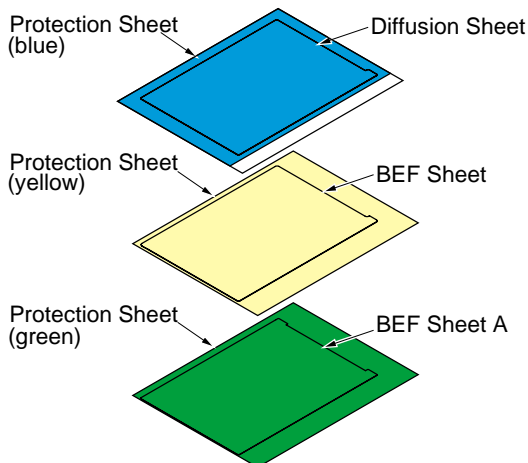
Fig. D14b

14. Installation of LCD Panel, Reflect Sheet, Lead Light Panel, Diffusion Sheet, BEF Sheet, BEF Sheet A and Panel Holder Unit

- a. When replacing the LCD Panel, the Diffusion Sheet, the BEF Sheet and the BEF Sheet A, make sure to remove the Protection Sheets.

To distinguish Sheets from attached Protection Sheet:

- A blue Protection Sheet is affixed to both faces of the Diffusion Sheet.
- A yellow Protection Sheet is affixed to both faces of the BEF Sheet.
- A green Protection Sheet is affixed to both faces of the BEF Sheet A.



- b. Use extreme care when handling the LCD Panel, the Reflect Sheet, the Lead Light Panel, the Diffusion Sheet, the BEF Sheet and the BEF Sheet A to avoid damage, dust, and spots (especially fingerprints, etc.)

Install in order shown below.

- 1) Install in order, the BEF Sheet A, BEF Sheet and Diffusion Sheet while inserting the corners of each sheet into the slots of the Panel Holder Unit.
- 2) Install the Lead Light Panel while inserting the corners into the slots of the Panel Holder Unit.
- 3) Place the Reflect Sheet so it is aligned with the edge of the Panel Holder Unit, then install it using the adhesive tape portions of the Reflect Sheet.

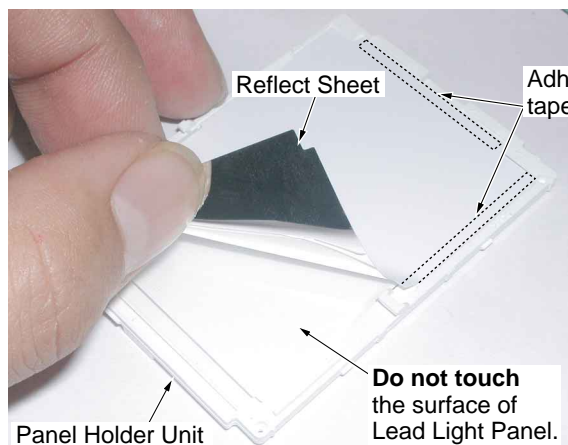


Fig. D15-1a

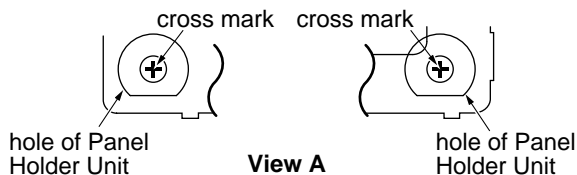
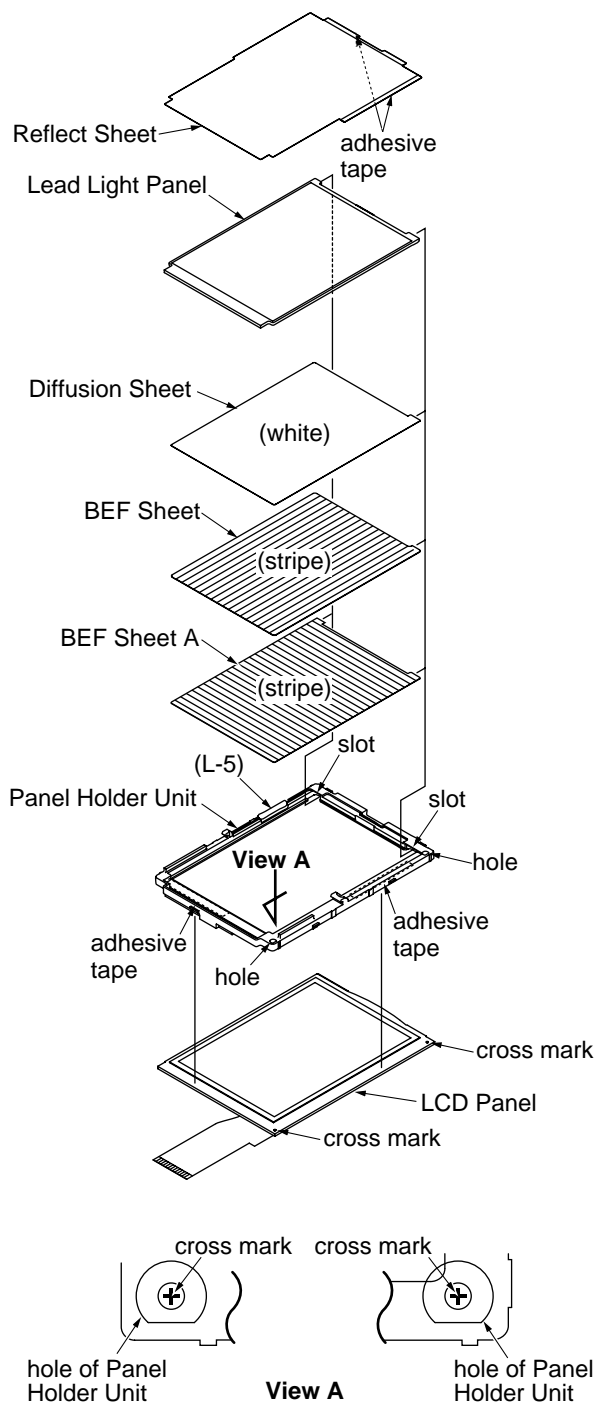


Fig. D15-2a

- 4) Install the LCD Panel with adhesive tape so that the cross marks are positioned in the center of the holes in the Panel Holder Unit.

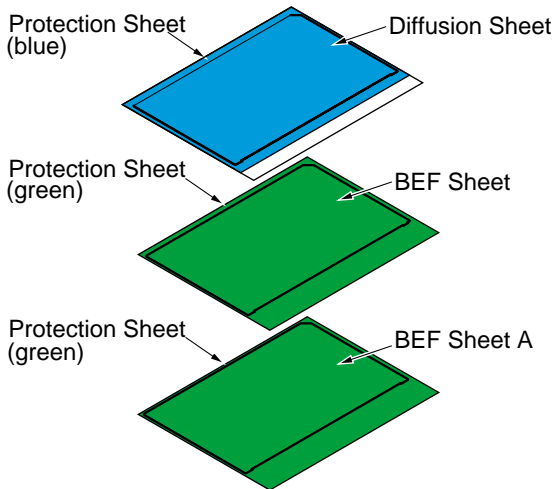
(For models with Wide LCD Monitor)

Installation of LCD Panel, Reflect Sheet Wide, Lead Light Panel, Diffusion Sheet, BEF Sheet, BEF Sheet A, Panel Holder Unit

- a. When replacing the LCD Panel, the Diffusion Sheet, the BEF Sheet and the BEF Sheet A, make sure to remove the Protection Sheets.

To distinguish Sheets from attached Protection Sheet:

- A blue Protection Sheet is affixed to both faces of the Diffusion Sheet.
- A green Protection Sheet is affixed to both faces of the BEF Sheet.
- A green Protection Sheet is affixed to both faces of the BEF Sheet A.



- b. Use extreme care when handling the LCD Panel, the Reflect Sheet, the Lead Light Panel, the Diffusion Sheet, the BEF Sheet and the BEF Sheet A to avoid damage, dust, and spots (especially fingerprints, etc.)

Install in order shown below.

- 1) Install in order, the BEF Sheet A, BEF Sheet and Diffusion Sheet while fitting the corners of each sheet into the corners of the Panel Holder Unit.
- 2) Install the Lead Light Panel while fitting the corners into the corners of the Panel Holder Unit.
- 3) Place the Reflect Sheet so it is aligned with the edge of the Panel Holder Unit, then install it using the adhesive tape portions of the Reflect Sheet.

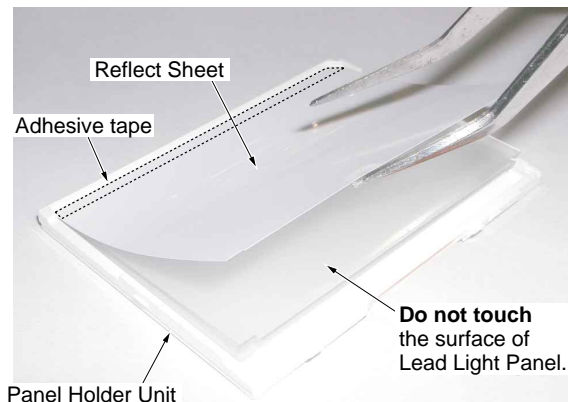


Fig. D15-1b

- 4) Install the LCD Panel to the Panel Holder Unit with adhesive tape.

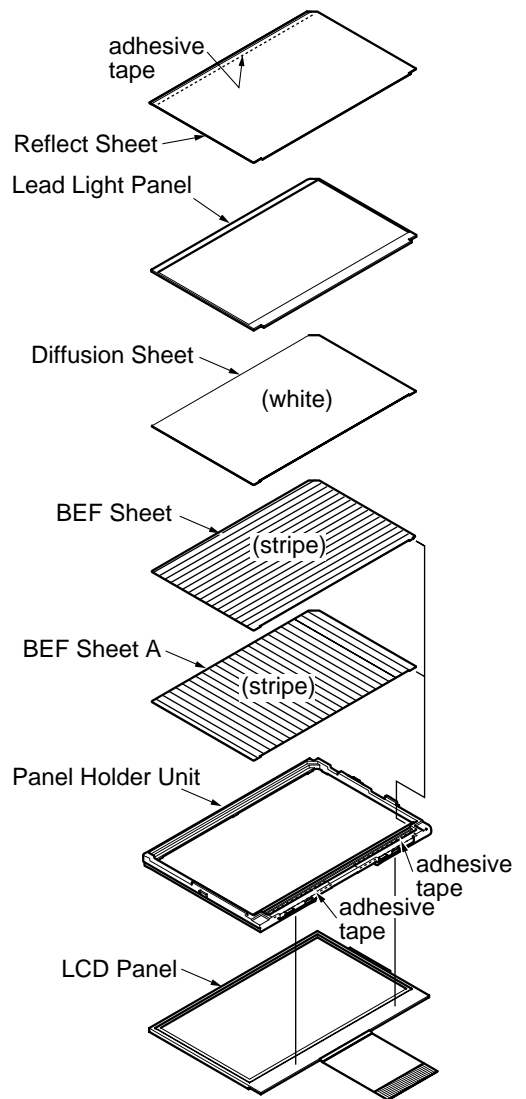


Fig. D15-2b

15. Removal of CCD P.C.B., Filter Rubber and Optical Filter

CAUTION:

- 1) When removing the CCD P.C.B., take care that the Optical Filter does not fall out.
- 2) Use extreme caution when removing the CCD P.C.B. as it is easily damaged by static electricity. Use a Wrist Strap while removing and installing.
- 3) Do not touch the CCD window surface.

Installation of CCD P.C.B., Filter Rubber and Optical Filter

Install in order shown below.

- 1) Install the Optical Filter correctly.

Note: Make sure that no dust gets on the Optical Filter or in the Lens Unit. Clean the Optical Filter with lens cleaning paper dampened with lens cleaner if necessary.

- 2) Install the Filter Rubber on the Optical Filter correctly as shown below.

Note: Make sure that no dust gets on the Filter Rubber.

- 3) Install the CCD P.C.B. into the Lens Unit. Then, tighten the 2 Screws (536).

Note: Do not touch the Lens Surface. Clean the surface with lens cleaning paper dampened with lens cleaner if necessary.

16. Installation of Zoom Motor Unit/Focus Motor Unit

Install the Zoom Motor Unit/Focus Motor Unit so that the Shaft of the Zoom Motor Unit/Focus Motor Unit is set in the Holder.

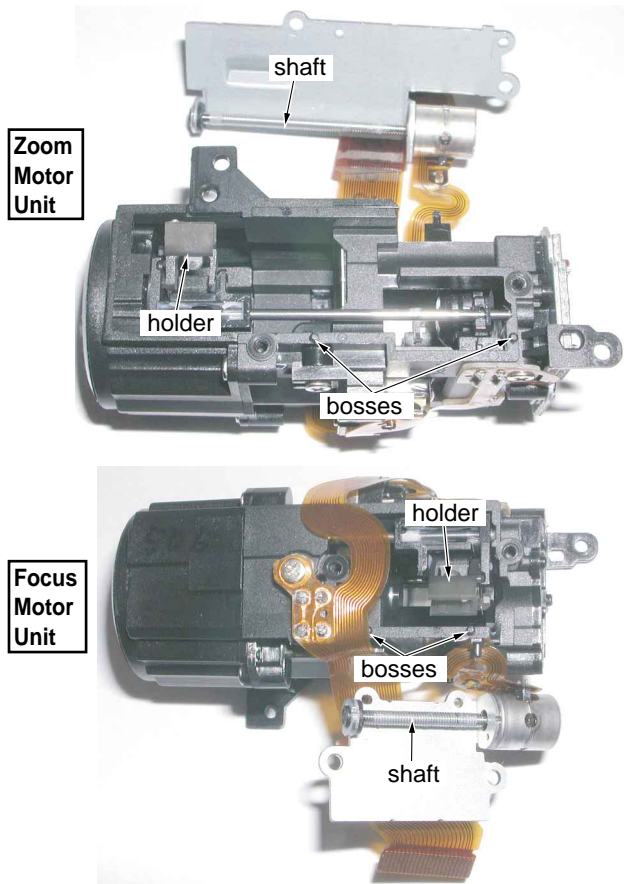
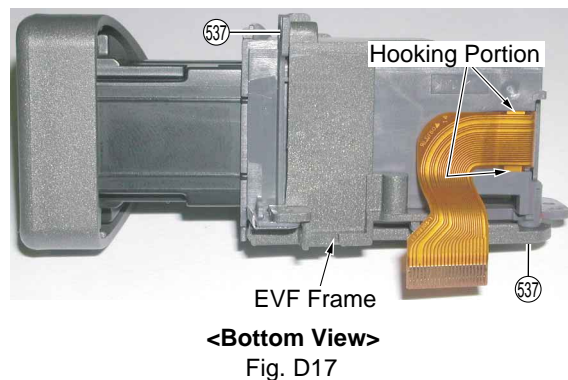
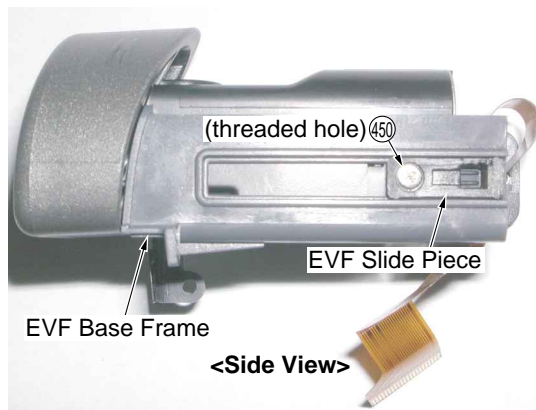
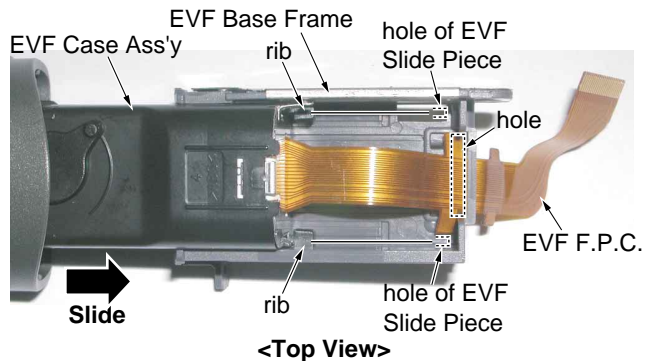


Fig. D16

17. Installation of EVF Slide Piece, EVF Base Frame and EVF Frame

- 1) Pass the EVF F.P.C. through the EVF Base Frame hole.
- 2) Install the EVF Slide Pieces into the EVF Base Frame from both sides.
- 3) Slide the EVF Case Ass'y to the end so that the ribs are inserted into the holes of the EVF Slide Pieces.
- 4) Locate the threaded holes, and tighten the 2 Screws (450).
- 5) After installing, confirm the EVF moves correctly.
- 6) Install the EVF Frame with the 2 Screws (537).
- 7) Hook both sides of the F.P.C. to the EVF Base Frame.



18. Installation of EVF Spring, EVF F.P.C.

- 1) Insert the EVF F.P.C. into the EVF Spring hole paying particular attention to the direction.
- 2) Connect the EVF F.P.C. to Connector FP951.
- 3) Insert the Locking Tab (L-2) at first, then fit the EVF Spring in the EVF Case and tighten the Screw (450).

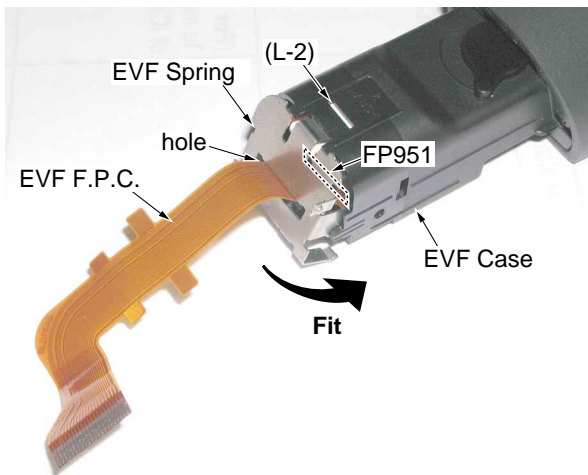


Fig. D18

19. Removal of Eye Cap

Remove the Eye Cap after removing the 2 Screws (524).

20. Handling cautions of EVF Lens Unit

Use extreme care when handling the EVF Lens Unit to avoid damage, dust, and spots (especially fingerprints, etc.)

Installation of EVF Lens Unit, Eye Sight Lever

- 1) Install the Eye Sight Lever into the EVF Case hole in the direction shown.
- 2) Install the EVF Lens Unit into the EVF Case.
- 3) After installing, confirm the Eye Sight Lever and the EVF Lens Unit work together correctly.

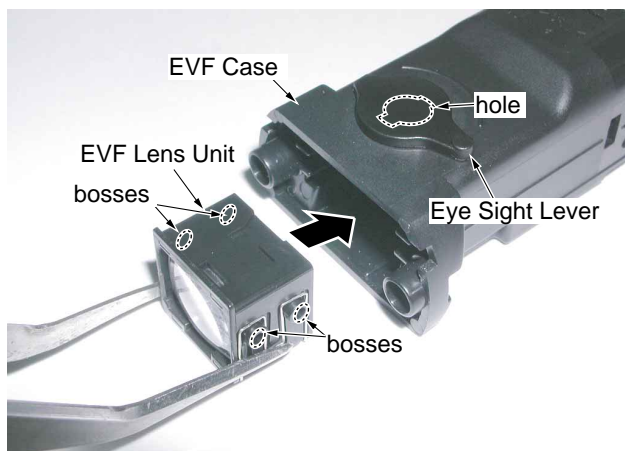
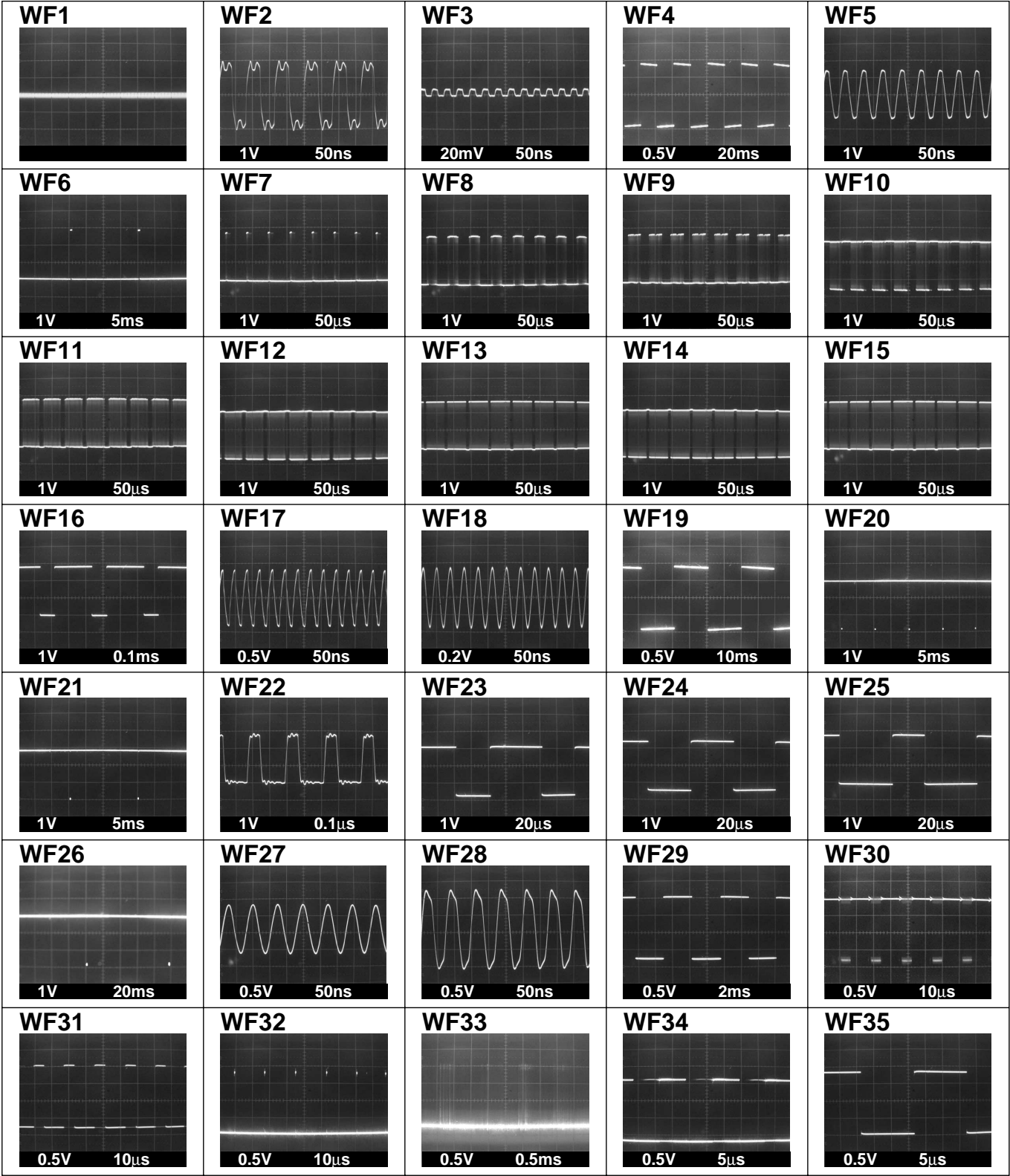
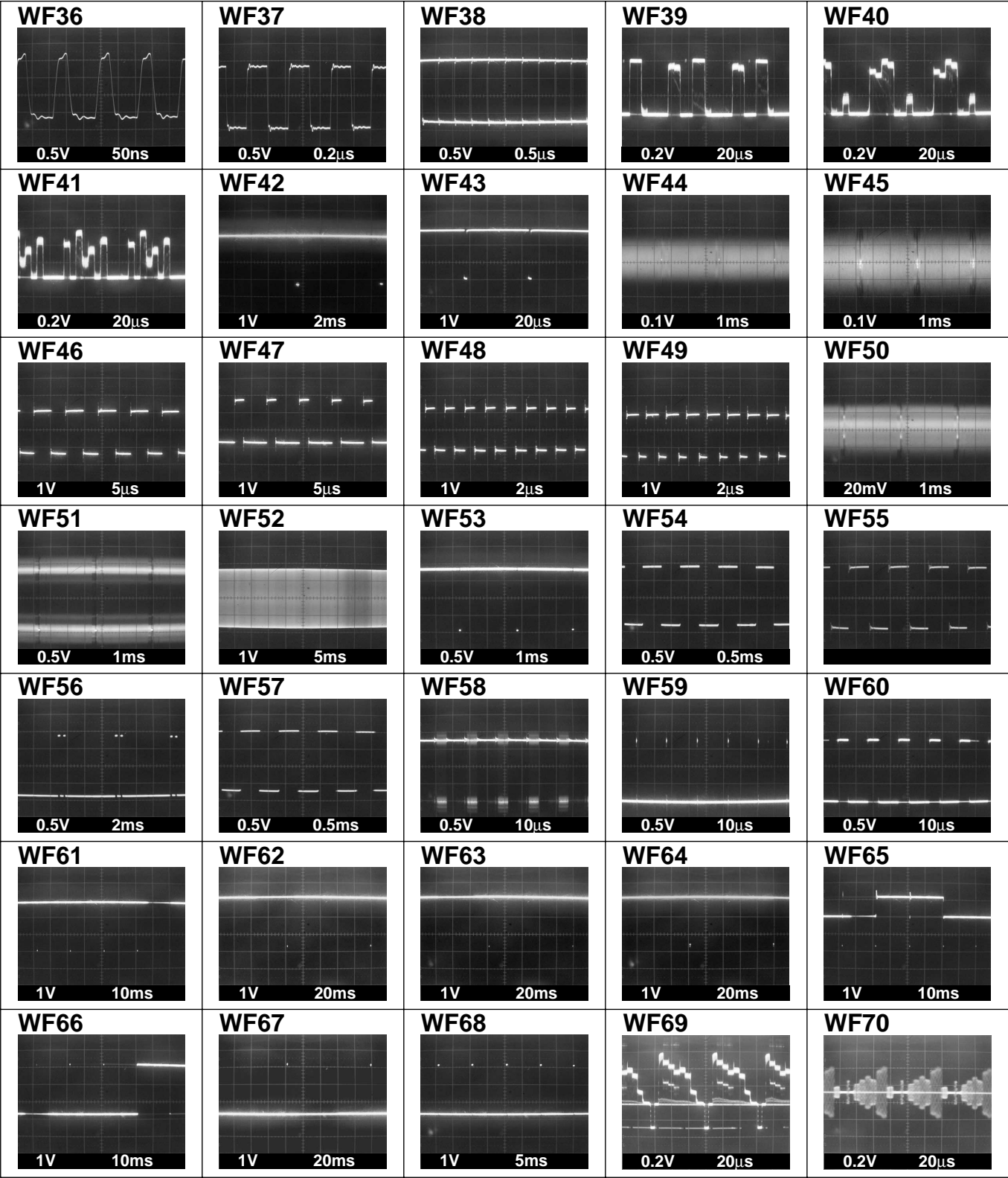
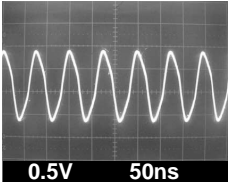
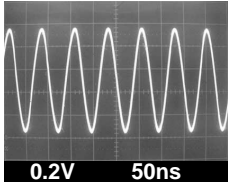
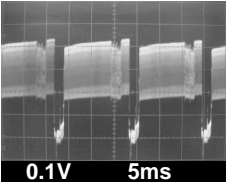
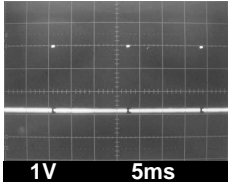
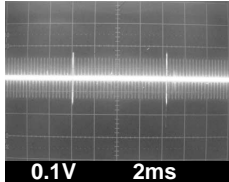
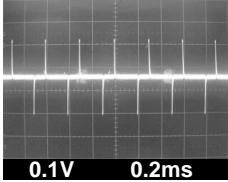
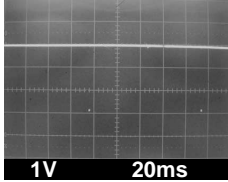
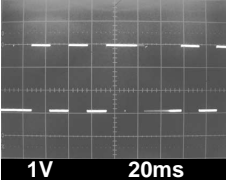
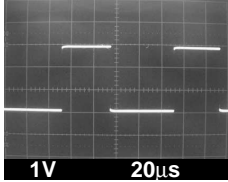
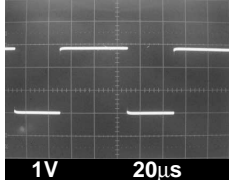
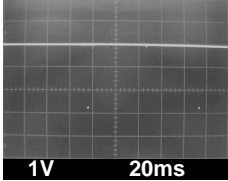
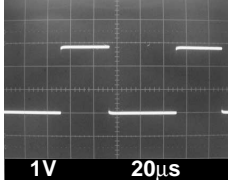
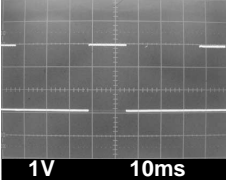


Fig. D19





<div>WF71</div>  <div>0.5V 50ns</div>	<div>WF72</div>  <div>0.2V 50ns</div>	<div>WF73</div>  <div>0.1V 5ms</div>	<div>WF74</div>  <div>1V 5ms</div>	<div>WF75</div>  <div>0.1V 2ms</div>
<div>WF76</div>  <div>0.1V 0.2ms</div>	<div>WF77</div>  <div>1V 20ms</div>	<div>WF78</div>  <div>1V 20ms</div>	<div>WF79</div>  <div>1V 20µs</div>	<div>WF80</div>  <div>1V 20µs</div>
<div>WF81</div>  <div>1V 20ms</div>	<div>WF82</div>  <div>1V 20µs</div>	<div>WF83</div>  <div>1V 10ms</div>		

Check Point of IC401

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
1	NC	-----	----	----	
2	NC	-----	----	----	
3	NC	-----	----	----	
4	NC	-----	----	----	
5	AFED33G	-----	----	----	
6	AFED33V	-----	----	----	
7	DM	R404 (RIGHT)	C-1	WF1	MAIN P.C.B.(F)
8	NC	-----	----	----	
9	DP	R405 (RIGHT)	C-1	WF1	MAIN P.C.B.(F)
10	VBUS	R407 (LOWER)	C-1	WF1	MAIN P.C.B.(F)
11	AFEA15V	-----	----	----	
12	AFEA15G	-----	----	----	
13	NC	-----	----	----	
14	REFRIN	R408 (LOWER)	D-2	WF1	MAIN P.C.B.(F)
15	AFEA33G	-----	----	----	
16	XIN	R413 (LOWER)	C-1	WF2	MAIN P.C.B.(F)
17	NC	-----	----	----	
18	XOUT	-----	----	----	
19	AFEA33V	-----	----	----	
20	AFED15V	-----	----	----	
21	AFED15G	-----	----	----	
22	VIF18	-----	----	----	
23	TEST	-----	----	----	
24	GND18	-----	----	----	
25	TCK	TP3908	C-1	WF1	MAIN P.C.B.(F)
26	NC	-----	----	----	
27	NC	-----	----	----	
28	TESTPIN0	-----	----	----	
29	TESTPIN1	-----	----	----	
30	TESTPIN2	-----	----	----	
31	MPBUS	-----	----	----	
32	A1	-----	----	----	
33	A2	-----	----	----	
34	A3	-----	----	----	
35	A4	-----	----	----	
36	A5	-----	----	----	
37	A6	-----	----	----	
38	A7/ALE	-----	----	----	
39	VDD15	-----	----	----	
40	GND15	-----	----	----	
41	D0	-----	----	----	
42	D1/AD1	-----	----	----	
43	D2/AD2	-----	----	----	
44	D3/AD3	-----	----	----	
45	D4/AD4	-----	----	----	
46	D5/AD5	-----	----	----	
47	D6/AD6	-----	----	----	
48	D7	-----	----	----	
49	D8	-----	----	----	
50	NC	-----	----	----	

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
51	NC	-----	----	----	
52	NC	-----	----	----	
53	TDO	TP3905	D-1	WF1	MAIN P.C.B.(F)
54	TDI	TP3906	D-1	WF1	MAIN P.C.B.(F)
55	TMS	TP3907	D-1	WF1	MAIN P.C.B.(F)
56	D9	-----	----	----	
57	D10	-----	----	----	
58	D11	-----	----	----	
59	D12	-----	----	----	
60	D13	-----	----	----	
61	D14	-----	----	----	
62	D15	-----	----	----	
63	VDD15	-----	----	----	
64	GND15	-----	----	----	
65	CLK27	TP3003	E-2	WF3	MAIN P.C.B.(F)
66	VIF18	-----	----	----	
67	GND18	-----	----	----	
68	SHMFIO/DBU0	-----	----	----	
69	SHMF11/DBU1	-----	----	----	
70	SHMF12/DBU2	-----	----	----	
71	SHMF13/DBU3	-----	----	----	
72	SHMF14/DBU4	-----	----	----	
73	SHMF15	-----	----	----	
74	SHMF16	-----	----	----	
75	NC	-----	----	----	
76	NC	-----	----	----	
77	NC	-----	----	----	
78	NC	-----	----	----	
79	SHMF17	-----	----	----	
80	SHMFICS	-----	----	----	
81	SHMFIRS	-----	----	----	
82	SHMFIWR	-----	----	----	
83	SHMFIRD/ACKU	-----	----	----	
84	SHMFINT	-----	----	----	
85	FRP/SSP	R411 (LEFT)	D-2	WF4	MAIN P.C.B.(F)
86	INT N	Q401-B	D-2	WF1	MAIN P.C.B.(F)
87	INF	R3019 (LEFT)	E-1	WF1	MAIN P.C.B.(F)
88	RD N	-----	----	----	
89	VR0 N	-----	----	----	
90	VR1 N	-----	----	----	
91	CS N	-----	----	----	
92	TESTPIN3	-----	----	----	
93	TESTPIN4	-----	----	----	
94	TESTPIN5	-----	----	----	
95	DREQ1 N	-----	----	----	
96	DACK1 N/DSTBO N	R415 (RIGHT)	D-2	WF1	MAIN P.C.B.(F)
97	DEND1 N	R414 (LEFT)	D-2	WF1	MAIN P.C.B.(F)
98	RST N	-----	----	----	
99	VIF18	-----	----	----	
100	GND	-----	----	----	

(C): COMPONENT SIDE (F): FOIL SIDE

Check Point of IC3001

CSP IC		Check point		WF NO.	Remarks	CSP IC		Check point		WF NO.	Remarks
Pin	Name					Pin	Name				
1	TMS	TP3026	D-3	WF1	MAIN P.C.B.(F)	66	ZACOMP	-----	----	----	
2	TCK	TP3027	D-3	WF1	MAIN P.C.B.(F)	67	VSS	-----	----	----	
3	TDI	TP3028	D-3	WF1	MAIN P.C.B.(F)	68	VDD15	-----	----	----	
4	VDD18	-----	----	----		69	ZBCOMP	-----	----	----	
5	TDO	TP3029	C-3	WF1	MAIN P.C.B.(F)	70	ZCCOMP	-----	----	----	
6	VDD18	-----	----	----		71	ZDCOMP	-----	----	----	
7	XDUO CS	-----	----	----		72	SIG	-----	----	----	
8	ADM(15)	-----	----	----		73	ALCPWM	R706 (RIGHT)	B-2	WF16	CAMERA P.C.B.(F)
9	ADM(14)	-----	----	----		74	VDD18 30	-----	----	----	
10	ADM(13)	-----	----	----		75	IRISCLOSE	IC701-7	F-3	WF1	CAMERA P.C.B.(C)
11	ADM(12)	-----	----	----		76	IRSDPEN	IC701-6	F-3	WF1	CAMERA P.C.B.(C)
12	VSS	-----	----	----		77	HOST REQ	-----	----	----	
13	ADM(11)	-----	----	----		78	HOST ACK	-----	----	----	
14	ADM(10)	-----	----	----		79	VDD18 30	-----	----	----	
15	ADM(9)	-----	----	----		80	DUO INT3	-----	----	----	
16	ADM(8)	-----	----	----		81	VSS	-----	----	----	
17	VSS	-----	----	----		82	DUO INT2	-----	----	----	
18	VDD15	-----	----	----		83	DUO INT1	-----	----	----	
19	ADM(7)	-----	----	----		84	DUO INTO	-----	----	----	
20	ADM(6)	-----	----	----		85	VSS	-----	----	----	
21	ADM(5)	-----	----	----		86	VDD15	-----	----	----	
22	ADM(4)	-----	----	----		87	VSS	-----	----	----	
23	VSS	-----	----	----		88	VSS	-----	----	----	
24	ADM(3)	-----	----	----		89	VDD18 30	-----	----	----	
25	ADM(2)	-----	----	----		90	VDD18 30	-----	----	----	
26	ADM(1)	-----	----	----		91	SD VDD15	-----	----	----	
27	VDD18	-----	----	----		92	SD VDD15	-----	----	----	
28	ADM[0]	-----	----	----		93	SD VSS	-----	----	----	
29	ALE	-----	----	----		94	SD VSS	-----	----	----	
30	XWEH	-----	----	----		95	SD VDD25	-----	----	----	
31	XWEL	-----	----	----		96	VDD18	-----	----	----	
32	VDD18	-----	----	----		97	SCLK54I	-----	----	----	
33	XRE	-----	----	----		98	VDD18	-----	----	----	
34	XREADY	-----	----	----		99	CLKSEL2	-----	----	----	
35	XRST ARM	TP3030	F-3	WF1	MAIN P.C.B.(F)	100	CLK27B	-----	----	----	
36	VDD15	-----	----	----		101	CLKSEL0	-----	----	----	
37	VSS	-----	----	----		102	CLK27A	TP3003	E-2	WF17	MAIN P.C.B.(F)
38	VCO AVDD25	-----	----	----		103	CLKSEL1	-----	----	----	
39	VCO AVDD25	-----	----	----		104	CLK135	-----	----	----	
40	FSLPFI	R3039 (LEFT)	F-2	WF1	MAIN P.C.B.(F)	105	SD VDD25	-----	----	----	
41	VCO AVSS	-----	----	----		106	SD VSS	-----	----	----	
42	VCO AVSS	-----	----	----		107	SD VDD15	-----	----	----	
43	PLL AVDD25	-----	----	----		108	VSS	-----	----	----	
44	PLL AVDD25	-----	----	----		109	VDD15	-----	----	----	
45	PLL AVSS	-----	----	----		110	TESTMD[0]	-----	----	----	
46	PLL AVSS	-----	----	----		111	TESTMD[1]	-----	----	----	
47	VSS	-----	----	----		112	TESTMD[2]	-----	----	----	
48	FCK45	TP3033	F-3	WF5	MAIN P.C.B.(F)	113	SD VDD15	-----	----	----	
49	CAMHD	TP3032	F-3	WF1	MAIN P.C.B.(F)	114	SD VSS	-----	----	----	
50	CAMVD	TP3031	F-3	WF6	MAIN P.C.B.(F)	115	SD VDD25	-----	----	----	
51	ADIN[9]	IC302-12	C-2	WF1	CAMERA P.C.B.(F)	116	TESTMD[3]	-----	----	----	
52	ADIN[8]	IC302-11	C-2	WF7	CAMERA P.C.B.(F)	117	TESTMD[4]	-----	----	----	
53	VDD18 30	-----	----	----		118	TESTMD[5]	-----	----	----	
54	ADIN(7)	IC302-10	C-2	WF8	CAMERA P.C.B.(F)	119	VSS	-----	----	----	
55	ADIN(6)	IC302-9	C-2	WF9	CAMERA P.C.B.(F)	120	VDD18	-----	----	----	
56	ADIN(5)	IC302-8	C-2	WF10	CAMERA P.C.B.(F)	121	VSS(NC)	-----	----	----	
57	ADIN(4)	IC302-5	C-2	WF11	CAMERA P.C.B.(F)	122	VDD18	-----	----	----	
58	ADIN(3)	IC302-4	C-3	WF12	CAMERA P.C.B.(F)	123	S400	-----	----	----	
59	ADIN(2)	IC302-3	C-3	WF13	CAMERA P.C.B.(F)	124	BIAS2K	-----	----	----	
60	ADIN(1)	IC302-2	C-3	WF14	CAMERA P.C.B.(F)	125	VSS	-----	----	----	
61	ADIN(0)	IC302-1	C-3	WF15	CAMERA P.C.B.(F)	126	CLK24I	R3006 (UPPER)	E-2	WF18	MAIN P.C.B.(F)
62	VDD18 30	-----	----	----		127	VDD25	-----	----	----	
63	FCA	-----	----	----		128	VSS(NC)	-----	----	----	
64	FCB	-----	----	----		129	VSS(NC)	-----	----	----	
65	F2C	-----	----	----		130	CLK24O	R3006 (LOWER)	E-2	WF18	MAIN P.C.B.(F)

(C): COMPONENT SIDE (F): FOIL SIDE

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
131	SD VDD25	-----	----	----	
132	SD VSS	-----	----	----	
133	SD VDD15	-----	----	----	
134	VDD15	-----	----	----	
135	1394 AVSS	-----	----	----	
136	1394 AVDD15	-----	----	----	
137	1394 AVSS	-----	----	----	
138	R[1]	R3008 (RIGHT)	E-2	WF1	MAIN P.C.B.(F)
139	VSS(NC)	-----	----	----	
140	R[0]	R3008 (LEFT)	E-2	WF1	MAIN P.C.B.(F)
141	1394 AVDD30	-----	----	----	
142	VSS(NC)	-----	----	----	
143	1394 AVSS	-----	----	----	
144	1394 AVSS	-----	----	----	
145	TPBN	R3011 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
146	VSS(NC)	-----	----	----	
147	VSS(NC)	-----	----	----	
148	TPBP	R3012 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
149	VSS(NC)	-----	----	----	
150	TPAN	R3013 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
151	TPAP	R3014 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
152	TPBIAS	C3025 (UPPER)	D-1	WF1	MAIN P.C.B.(F)
153	1394 AVDD30	-----	----	----	
154	1394 AVDD15	-----	----	----	
155	VDD15	-----	----	----	
156	XRST	R3083 (UPPER)	F-3	WF1	MAIN P.C.B.(F)
157	SSP	TP3002	D-1	WF1	MAIN P.C.B.(F)
158	VDD18	-----	----	----	
159	HID	TP3203	C-3	WF29	MAIN P.C.B.(F)
160	VDD18	-----	----	----	
161	DBR3	TP3205	D-3	WF30	MAIN P.C.B.(F)
162	DBR2	-----	----	----	
163	DBR1	-----	----	----	
164	DBR0	-----	----	----	
165	VSS	-----	----	----	
166	ACKR	TP3207	D-3	WF31	MAIN P.C.B.(F)
167	REQR	TP3206	D-3	WF32	MAIN P.C.B.(F)
168	ADDA[3]	TP3208	D-3	WF33	MAIN P.C.B.(F)
169	ADDA[2]	-----	----	----	
170	VSS	-----	----	----	
171	ADDA[1]	-----	----	----	
172	VDD15	-----	----	----	
173	ADDA[0]	-----	----	----	
174	VAL	-----	----	----	
175	READH	-----	----	----	
176	INTSEG	-----	----	----	
177	VDD18	-----	----	----	
178	DODAT	IC3101-4	F-4	WF34	MAIN P.C.B.(F)
179	VDD18	-----	----	----	
180	DOLRCK	IC3101-1	F-4	WF35	MAIN P.C.B.(F)
181	DOMCK	IC3101-2	F-4	WF36	MAIN P.C.B.(F)
182	DOBCK	IC3101-3	F-4	WF37	MAIN P.C.B.(F)
183	AIDAT1	IC3101-5	F-4	WF38	MAIN P.C.B.(F)
184	AIDAT2	-----	----	----	
185	VSS	-----	----	----	
186	ADECDAT	-----	----	----	
187	VSS	-----	----	----	
188	CLK27C	-----	----	----	
189	LYCI0	-----	----	----	
190	LYCI1	-----	----	----	
191	LYCI2	-----	----	----	
192	LYCI3	-----	----	----	
193	VDD15	-----	----	----	
194	LYCI4	-----	----	----	
195	LYCI5	-----	----	----	

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
196	LYCI6	-----	----	----	
197	LYCI7	-----	----	----	
198	VDD18	-----	----	----	
199	FRP	TP3001	D-2	WF19	MAIN P.C.B.(F)
200	INF	R3019 (LEFT)	E-1	WF1	MAIN P.C.B.(F)
201	SHMFINT	-----	----	----	
202	SHMFIRD	-----	----	----	
203	VDD18	-----	----	----	
204	VSS	-----	----	----	
205	SHMFIMR	-----	----	----	
206	SHMFIRS	-----	----	----	
207	SHMFICS	-----	----	----	
208	SHMFID0	-----	----	----	
209	SHMFID1	-----	----	----	
210	SHMFID2	-----	----	----	
211	SHMFID3	-----	----	----	
212	SHMFID4	-----	----	----	
213	SHMFID5	-----	----	----	
214	SHMFID6	-----	----	----	
215	SHMFID7	-----	----	----	
216	CLK27D	-----	----	----	
217	YCIO[0]	-----	----	----	
218	YCIO[1]	-----	----	----	
219	YCIO[2]	-----	----	----	
220	YCIO[3]	-----	----	----	
221	VSS	-----	----	----	
222	YCIO[4]	-----	----	----	
223	YCIO[5]	-----	----	----	
224	YCIO[6]	-----	----	----	
225	YCIO[7]	-----	----	----	
226	CLK27X	-----	----	----	
227	YCIN(0)	-----	----	----	
228	YCIN(1)	-----	----	----	
229	YCIN(2)	-----	----	----	
230	YCIN(3)	-----	----	----	
231	YCIN(4)	-----	----	----	
232	YCIN(5)	-----	----	----	
233	VDD15	-----	----	----	
234	YCIN(6)	-----	----	----	
235	YCIN(7)	-----	----	----	
236	VSS	-----	----	----	
237	VDD18	-----	----	----	
238	BUS MODE	-----	----	----	
239	VDD18	-----	----	----	
240	VSS	-----	----	----	
241	DAC AVDD25	-----	----	----	
242	LCDROUT	C8001 (LOWER)	A-3	W39	MAIN P.C.B.(C)
243	LCDRVBS	C3028 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
244	DAC AVSS	-----	----	----	
245	DAC AVSS	-----	----	----	
246	DAC AVDD25	-----	----	----	
247	DAC AVDD25	-----	----	----	
248	LCDGOUT	C8002 (LOWER)	A-3	WF40	MAIN P.C.B.(C)
249	LCDBGVBS	C3029 (RIGHT)	E-1	WF1	MAIN P.C.B.(F)
250	LCDREF	C3030 (LEFT)	E-1	WF1	MAIN P.C.B.(F)
251	DAC AVSS	-----	----	----	
252	DAC AVDD25	-----	----	----	
253	LCDBOUT	C8003 (LOWER)	B-3	WF41	MAIN P.C.B.(C)
254	LCDBVBS	C3031 (RIGHT)	F-1	WF1	MAIN P.C.B.(F)
255	DAC AVSS	-----	----	----	
256	DAC AVSS	-----	----	----	
257	DAC AVDD25	-----	----	----	
258	DAC AVDD25	-----	----	----	
259	YOUT	C3102 (LOWER)	G-3	WF69	MAIN P.C.B.(F)
260	YVBS	C3032 (LEFT)	F-1	WF1	MAIN P.C.B.(F)

(C): COMPONENT SIDE (F): FOIL SIDE

CSP IC		Check point		WF NO.	Remarks	CSP IC		Check point		WF NO.	Remarks
Pin	Name					Pin	Name				
261	YREF	C3033 (RIGHT)	F-1	WF1	MAIN P.C.B.(F)	326	OSDCLK	-----	----	----	
262	DAC AVSS	-----	----	----		327	FSLPFO	R3039 (LEFT)	F-3	WF1	MAIN P.C.B.(F)
263	DAC AVDD25	-----	----	----		328	DTCLK	-----	----	----	
264	COUT	C3101 (LOWER)	F-3	WF70	MAIN P.C.B.(F)	329	DVM	-----	----	----	
265	CVBS	C3034 (LEFT)	F-1	WF1	MAIN P.C.B.(F)	330	FAD VDD32	-----	----	----	
266	CREF	C3035 (LEFT)	F-1	WF1	MAIN P.C.B.(F)	331	FAD VSS	-----	----	----	
267	DAC AVSS	-----	----	----		332	FAD VDD15	-----	----	----	
268	VSS	-----	----	----		333	VDD30	-----	----	----	
269	VDD32	-----	----	----		334	VDD18	-----	----	----	
270	VSS	-----	----	----		335	TRACECLK	-----	----	----	
271	SDCLK	L3016 (RIGHT)	B-1	WF1	MAIN P.C.B.(C)	336	TRACESYNC	-----	----	----	
272	DATA(3)	R6314 (UPPER)	C-3	WF1	CAMERA P.C.B.(C)	337	TRACEPKT[0]	-----	----	----	
273	DATA(2)	R6315 (UPPER)	B-3	WF1	CAMERA P.C.B.(C)	338	TRACEPKT[1]	-----	----	----	
274	DATA(1)	R6311 (UPPER)	C-3	WF1	CAMERA P.C.B.(C)	339	VDD18	-----	----	----	
275	DATA(0)	R6312 (UPPER)	C-3	WF1	CAMERA P.C.B.(C)	340	VDD15	-----	----	----	
276	VSS(NC)	-----	----	----		341	VSS	-----	----	----	
277	CMD	R6313 (UPPER)	C-3	WF1	CAMERA P.C.B.(C)	342	SD VDD15	-----	----	----	
278	VSS(NC)	-----	----	----		343	SD VSS	-----	----	----	
279	SD VDD32	-----	----	----		344	SD VDD25	-----	----	----	
280	VDD15	-----	----	----		345	TRACEPKT[2]	-----	----	----	
281	CLK480	-----	----	----		346	TRACEPKT[3]	-----	----	----	
282	CLK48I	-----	----	----		347	TRACEPKT[4]	-----	----	----	
283	VSS(NC)	-----	----	----		348	TRACEPKT[5]	-----	----	----	
284	VSS(NC)	-----	----	----		349	TRACEPKT[6]	-----	----	----	
285	VSS(NC)	-----	----	----		350	TRACEPKT[7]	-----	----	----	
286	VDD25	-----	----	----		351	PIPESTAT[0]	-----	----	----	
287	VSS	-----	----	----		352	PIPESTAT[1]	-----	----	----	
288	VSS(NC)	-----	----	----		353	PIPESTAT[2]	-----	----	----	
289	VSS(NC)	-----	----	----		354	A15	-----	----	----	
290	VSS(NC)	-----	----	----		355	VSS	-----	----	----	
291	USB DP	-----	----	----		356	SD VDD25	-----	----	----	
292	USB DN	-----	----	----		357	SD VSS	-----	----	----	
293	VSS	-----	----	----		358	SD VDD15	-----	----	----	
294	USB VDD32	-----	----	----		359	VSS	-----	----	----	
295	USB VDD32	-----	----	----		360	RTCK	-----	----	----	
296	VDD30	-----	----	----		361	XTRST	R3083 (LOWER)	F-3	WF1	MAIN P.C.B.(F)
297	CAMLENSDTC	IC701-2	F-3	WF20	CAMERA P.C.B.(C)	362	NC	-----	----	----	
298	CAMLENSCLK	IC701-3	F-3	WF20	CAMERA P.C.B.(C)	363	NC	-----	----	----	
299	CAMLENSCS	IC701-4	F-3	WF20	CAMERA P.C.B.(C)	364	NC	-----	----	----	
300	CAMCGAFEDTC	IC302-63	D-3	WF21	CAMERA P.C.B.(F)						
301	VDD30	-----	----	----							
302	CAMCGAFECLK	IC302-64	C-3	WF1	CAMERA P.C.B.(F)						
303	CAMCGCS	IC302-62	D-3	WF1	CAMERA P.C.B.(F)						
304	CAMAFECs	IC302-61	D-3	WF1	CAMERA P.C.B.(F)						
305	VSS	-----	----	----							
306	OSDVR	-----	----	----							
307	OSDVG	-----	----	----							
308	OSDVB	-----	----	----							
309	OSDBLKA	-----	----	----							
310	VSS	-----	----	----							
311	VDD15	-----	----	----							
312	OSDBLKB	-----	----	----							
313	FAD VDD15	-----	----	----							
314	FAD VSS	-----	----	----							
315	FAD VDD32	-----	----	----							
316	OSDHD	-----	----	----							
317	OSDVD	-----	----	----							
318	LCDVBLK	IC8001-61	B-3	WF42	MAIN P.C.B.(C)						
319	LCDHD	IC8001-62	B-3	WF43	MAIN P.C.B.(C)						
320	VSS	-----	----	----							
321	LCDPOL	-----	----	----							
322	VDD30	-----	----	----							
323	CLK45M ZB	IC701-34	F-3	WF22	CAMERA P.C.B.(C)						
324	AFDRVD	IC701-5	F-3	WF1	CAMERA P.C.B.(C)						
325	LINPWM	-----	----	----							

(C): COMPONENT SIDE (F): FOIL SIDE

Check Point of IC3201

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
1	DVSS	-----	-----	-----	
2	VRH	C3201 (LEFT)	D-4	WF1	MAIN P.C.B.(F)
3	VRL	C3202 (LEFT)	D-4	WF1	MAIN P.C.B.(F)
4	AVD12 (ADC1)	-----	-----	-----	
5	ADTEST	-----	-----	-----	
6	AVS12 (ADC1)	-----	-----	-----	
7	AVD14 (AMP1)	-----	-----	-----	
8	AVS14 (AMP1)	-----	-----	-----	
9	PBIN	R3201 (LEFT)	D-4	WF44	MAIN P.C.B.(F)
10	AVD15 (ADC2)	-----	-----	-----	
11	ATFIN	C3207 (LOWER)	C-4	WF45	MAIN P.C.B.(F)
12	AVS15 (ADC2)	-----	-----	-----	
13	AVD13 (ADC1/2)	-----	-----	-----	
14	AVS13 (ADC1/2)	-----	-----	-----	
15	AVD16 (VREF)	-----	-----	-----	
16	VCORP	R3203 (LEFT)	C-4	WF1	MAIN P.C.B.(F)
17	AVS16 (VREF)	-----	-----	-----	
18	AVS22 (DAC2/3)	-----	-----	-----	
19	OSO	R3207 (LOWER)	C-4	WF1	MAIN P.C.B.(F)
20	VREF3	-----	-----	-----	
21	VREF2	C3209 (LEFT)	D-3	WF1	MAIN P.C.B.(F)
22	AVD22 (DAC2/3)	-----	-----	-----	
23	ATF0	R3204 (LOWER)	C-4	WF1	MAIN P.C.B.(F)
24	VREF1	C3211 (LOWER)	C-4	WF1	MAIN P.C.B.(F)
25	FPORP	R3205 (LOWER)	C-4	WF1	MAIN P.C.B.(F)
26	AVS21 (DAC1)	-----	-----	-----	
27	AVD21 (DAC1)	-----	-----	-----	
28	FRP	R3206 (RIGHT)	B-4	WF1	MAIN P.C.B.(F)
29	VCOIN	R3207 (UPPER)	C-4	WF1	MAIN P.C.B.(F)
30	AVS11 (VCO)	-----	-----	-----	
31	AVD11 (VCO)	-----	-----	-----	
32	DVDD25	-----	-----	-----	
33	AGCCTL	R3209 (RIGHT)	C-5	WF46	MAIN P.C.B.(F)
34	RECCUR	R3210 (RIGHT)	C-4	WF47	MAIN P.C.B.(F)
35	CAPERR	R3211 (RIGHT)	C-4	WF48	MAIN P.C.B.(F)
36	CYLERR	R3212 (RIGHT)	C-4	WF49	MAIN P.C.B.(F)
37	CAPRSF	IC2001-17	D-4	WF1	MAIN P.C.B.(F)
38	DVSS	-----	-----	-----	
39	TRST	R3225 (UPPER)	D-3	WF1	MAIN P.C.B.(F)
40	TMS	TP3907	D-1	WF1	MAIN P.C.B.(F)
41	TDI	R3079 (UPPER)	F-3	WF1	MAIN P.C.B.(F)
42	TDO	TP3906	D-1	WF1	MAIN P.C.B.(F)
43	TCK	TP3908	C-1	WF1	MAIN P.C.B.(F)
44	HID1	TP3203	C-3	WF1	MAIN P.C.B.(F)
45	HID2	IC5001-16	B-4	WF1	MAIN P.C.B.(F)
46	SPA	TP3209	C-3	WF1	MAIN P.C.B.(F)
47	DVSS	-----	-----	-----	
48	RECI	IC5001-19	B-4	WF1	MAIN P.C.B.(F)
49	EQHLD	IC5001-11	B-4	WF50	MAIN P.C.B.(F)
50	HSE	IC5001-8	B-4	WF51	MAIN P.C.B.(F)
51	RECCLK	IC5001-10	B-4	WF52	MAIN P.C.B.(F)
52	DVDD18	-----	-----	-----	
53	RECCTL	IC5001-15	B-4	WF53	MAIN P.C.B.(F)
54	PBH	IC5001-18	B-4	WF1	MAIN P.C.B.(F)
55	CYLFG	TP3201	C-3	WF54	MAIN P.C.B.(F)
56	DriveCLK	R2017 (LOWER)	D-3	WF55	MAIN P.C.B.(C)
57	DVSS	-----	-----	-----	
58	CYLPG	TP3202	C-3	WF56	MAIN P.C.B.(F)
59	ADM[0]	-----	-----	-----	
60	ADM[1]	-----	-----	-----	

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
61	ADM[2]	IC2001-8	D-4	WF1	MAIN P.C.B.(C)
62	ADD18	-----	-----	-----	
63	ADM[3]	IC2001-9	D-4	WF1	MAIN P.C.B.(C)
64	ADM[4]	R3226 (UPPER)	C-2	WF1	MAIN P.C.B.(F)
65	ADM[5]	R3232 (UPPER)	C-2	WF1	MAIN P.C.B.(F)
66	DVSS	-----	-----	-----	
67	ADM[6]	R3233 (UPPER)	D-2	WF1	MAIN P.C.B.(F)
68	ADM[7]	R3234 (UPPER)	D-2	WF1	MAIN P.C.B.(F)
69	ADM[8]	R2016 (LOWER)	D-3	WF57	MAIN P.C.B.(C)
70	DVDD18	-----	-----	-----	
71	ADM[9]	R2006 (LEFT)	C-4	WF1	MAIN P.C.B.(C)
72	ADM[10]	IC2001-3	D-4	WF1	MAIN P.C.B.(C)
73	ADM[11]	R3087 (UPPER)	E-1	WF1	MAIN P.C.B.(F)
74	ADM[12]	R3015 (UPPER)	E-1	WF1	MAIN P.C.B.(F)
75	DVSS	-----	-----	-----	
76	ADM[13]	R3016 (UPPER)	E-1	WF1	MAIN P.C.B.(F)
77	ADM[14]	R3017 (UPPER)	E-1	WF1	MAIN P.C.B.(F)
78	ADM[15]	TP3208	D-3	WF1	MAIN P.C.B.(F)
79	AS	-----	-----	-----	
80	DVDD18	-----	-----	-----	
81	XRE	-----	-----	-----	
82	XWEL	R2029 (UPPER)	E-4	WF1	MAIN P.C.B.(F)
83	XWEH	R2028 (RIGHT)	F-4	WF1	MAIN P.C.B.(F)
84	CLK27A	TP3003	E-2	WF17	MAIN P.C.B.(F)
85	DVSS	-----	-----	-----	
86	DVR[0]	-----	-----	-----	
87	DVR[1]	-----	-----	-----	
88	DVR[2]	-----	-----	-----	
89	DVR[3]	TP3205	D-3	WF58	MAIN P.C.B.(F)
90	DVDD18	-----	-----	-----	
91	REQR	TP3206	D-3	WF59	MAIN P.C.B.(F)
92	ACKR	TP3207	D-3	WF60	MAIN P.C.B.(F)
93	TSTCKI	-----	-----	-----	
94	DVSS	-----	-----	-----	
95	TSTD[0]	-----	-----	-----	
96	TSTD[1]	-----	-----	-----	
97	TSTD[2]	-----	-----	-----	
98	DVDD18	-----	-----	-----	
99	TSTD[3]	-----	-----	-----	
100	TSTD[4]	-----	-----	-----	
101	TSTD[5]	-----	-----	-----	
102	TSTD[6]	-----	-----	-----	
103	DVSS	-----	-----	-----	
104	TSTD[7]	-----	-----	-----	
105	TSTD[8]	-----	-----	-----	
106	TSTD[9]	-----	-----	-----	
107	VPD	-----	-----	-----	
108	DVDD18	-----	-----	-----	
109	XRST	R3225 (LOWER)	D-3	WF1	MAIN P.C.B.(F)
110	TSTMD	-----	-----	-----	
111	CS	-----	-----	-----	
112	GESW	-----	-----	-----	

(C): COMPONENT SIDE (F): FOIL SIDE

Check Point of IC6001

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
A1	NC	-----	----	----	
A2	VREFL				
A3	DEW	R6041 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
A4	EXT MIC	R6038 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
A5	ADKEY3	R6007 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
A6	SENS TMP LENS	R6039 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
A7	MICAD1	R6079 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
A8	T PHOTO	R6072 (RIGHT)	C-1	WF1	MAIN P.C.B.(C)
A9	SBA SCK	IC3101-15	F-4	WF1	MAIN P.C.B.(F)
A10	NC	-----	----	----	
A11	SBA DTI	R6102 (UPPER)	C-1	WF1	MAIN P.C.B.(C)
A12	NC	-----	----	----	
A13	EVF WIDE	TP3914	B-1	WF1	MAIN P.C.B.(C)
A14	EVF BL	Q1026-B2	A-4	WF1	MAIN P.C.B.(F)
A15	NC	-----	----	----	
A16	NC	-----	----	----	
A17	X2	R6109 (UPPER)	B-1	WF71	MAIN P.C.B.(C)
B1	AVCC31	-----	----	----	
B2	VREFH	-----	----	----	
B3	UNI REMO	R6042 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
B4	IR OUT	R6124 (RIGHT)	B-1	WF1	MAIN P.C.B.(C)
B5	BATT	R6045 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
B6	ADKEY4	R6008 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
B7	MICAD2	R6080 (RIGHT)	C-1	WF1	MAIN P.C.B.(C)
B8	LOAD LOCK DET	R2019 (RIGHT)	E-4	WF1	MAIN P.C.B.(F)
B9	NC	-----	----	----	
B10	NC	-----	----	----	
B11	SBA DTO	R6102 (UPPER)	C-1	WF1	MAIN P.C.B.(C)
B12	NC	-----	----	----	
B13	LCD WIDE	TP3913	B-1	WF1	MAIN P.C.B.(C)
B14	LCD ON H	Q1041-B	A-4	WF1	MAIN P.C.B.(F)
B15	NC	-----	----	----	
B16	NC	-----	----	----	
B17	CVSS	-----	----	----	
B18	X1	R6108 (UPPER)	B-1	WF72	MAIN P.C.B.(C)
C1	PCST0	TP6301	D-2	WF1	MAIN P.C.B.(C)
C2	PCST3	TP6304	D-2	WF1	MAIN P.C.B.(C)
C3	CAM HANSEIHIN	R6036 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
C4	HANSEIHIN DET	TP6002	D-1	WF1	MAIN P.C.B.(C)
C5	BATT REF	R1011 (LOWER)	F-3	WF1	MAIN P.C.B.(C)
C6	ZOOM SW	R6040 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
C7	MICAD3	R6081 (RIGHT)	C-1	WF1	MAIN P.C.B.(C)
C8	AVSS	-----	----	----	
C9	NC	-----	----	----	
C10	NC	-----	----	----	
C11	SBA CS	IC3101-14	F-4	WF1	MAIN P.C.B.(F)
C12	NC	-----	----	----	
C13	LCD -15V ON H	-----	----	----	
C14	NC	-----	----	----	
C15	NC	-----	----	----	
C16	NC	-----	----	----	
C17	CVCC15	-----	----	----	
C18	XT2	-----	----	----	
D1	TDO	-----	----	----	
D2	PCST2	TP6303	C-1	WF1	MAIN P.C.B.(C)
D3	DINT	-----	----	----	
D4	DVCC15	-----	----	----	
D5	FNO	C6022 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
D6	ADKEY1	R6005 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
D7	S PHOTO	R6071 (LEFT)	D-1	WF1	MAIN P.C.B.(C)
D8	DVCC15	-----	----	----	
D9	DVSS	-----	----	----	
D10	NC	-----	----	----	
D11	NC	-----	----	----	
D12	NC	-----	----	----	
D13	NC	-----	----	----	
D14	NC	-----	----	----	
D15	DVCC34	-----	----	----	
D16	NC	-----	----	----	
D17	NC	-----	----	----	
D18	XT1	-----	----	----	

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
E1	DCLK	TP6410	D-2	WF1	MAIN P.C.B.(C)
E2	PCST1	TP6302	D-1	WF1	MAIN P.C.B.(C)
E3	TRST	-----	----	----	
E4	PCST4	TP6305	D-1	WF1	MAIN P.C.B.(C)
E5	ENDIAN	-----	----	----	
E6	ADKEY2	R6006 (RIGHT)	D-1	WF1	MAIN P.C.B.(C)
E7	Y LEVEL	R3115 (LEFT)	G-4	WF73	MAIN P.C.B.(F)
E8	REGD3V DET	R6073 (UPPER)	C-1	WF1	MAIN P.C.B.(C)
E9	BATT D	R6044 (UPPER)	B-1	WF1	MAIN P.C.B.(C)
E10	NC	-----	----	----	
E11	NC	-----	----	----	
E12	NC	-----	----	----	
E13	NC	-----	----	----	
E14	NC	-----	----	----	
E15	BVCC	-----	----	----	
E16	NC	-----	----	----	
E17	NC	-----	----	----	
E18	DVCC15	-----	----	----	
F1	DVSS	-----	----	----	
F2	TMS	-----	----	----	
F3	EJE	-----	----	----	
F4	BUSMD	-----	----	----	
F5	BOOT	-----	----	----	
F7	AVSS	-----	----	----	
F8	AVSS	-----	----	----	
F9	AVCC32	-----	----	----	
F10	DVCC34	-----	----	----	
F11	NC	-----	----	----	
F12	DVSS	-----	----	----	
F14	BUPMD	-----	----	----	
F15	NC	-----	----	----	
F16	NC	-----	----	----	
F17	DVCC33	-----	----	----	
F18	NC	-----	----	----	
G1	RESET	TP6001	E-2	WF1	MAIN P.C.B.(C)
G2	TDI	-----	----	----	
G3	FVSS15	-----	----	----	
G4	DVSS	-----	----	----	
G5	TOVR	TP6401	D-1	WF1	MAIN P.C.B.(C)
G6	BW0	-----	----	----	
G13	NC	-----	----	----	
G14	BRESET	-----	----	----	
G15	CS1/USB2 CS	-----	----	----	
G16	ALE	-----	----	----	
G17	NC	-----	----	----	
G18	FVSS15	-----	----	----	
H1	NMI	-----	----	----	
H2	DVCC31	-----	----	----	
H3	TPD7	TP6409	C-1	WF1	MAIN P.C.B.(C)
H4	BW1	-----	----	----	
H5	PLLOFF	-----	----	----	
H6	TCK	-----	----	----	
H13	TEST1	-----	----	----	
H14	XWEL	-----	----	----	
H15	XWEH	-----	----	----	
H16	XREADY	-----	----	----	
H17	XRE	-----	----	----	
H18	CS0/XDUO CS	-----	----	----	
J1	TPD2	TP6404	C-1	WF1	MAIN P.C.B.(C)
J2	TPD3	TP6405	C-1	WF1	MAIN P.C.B.(C)
J3	TPD4	TP6406	D-1	WF1	MAIN P.C.B.(C)
J4	TPD5	TP6407	C-1	WF1	MAIN P.C.B.(C)
J5	TPD6	TP6408	D-1	WF1	MAIN P.C.B.(C)
J6	FVSS15	-----	----	----	
J13	DVSS	-----	----	----	
J14	NC	-----	----	----	
J15	NC	-----	----	----	
J16	NC	-----	----	----	
J17	NC	-----	----	----	
J18	NC	-----	----	----	
K1	TPD0	TP6402	C-1	WF1	MAIN P.C.B.(C)

(C): COMPONENT SIDE (F): FOIL SIDE

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
K2	TPD1	TP6403	C-1	WF1	MAIN P.C.B.(C)
K3	TPC5	TP6311	D-1	WF1	MAIN P.C.B.(C)
K4	TPC6	TP6312	C-1	WF1	MAIN P.C.B.(C)
K5	DVSS	-----	-----	-----	
K6	DVSS	-----	-----	-----	
K13	TEST2	-----	-----	-----	
K14	DUOINT0	-----	-----	-----	
K15	DUOINT2	-----	-----	-----	
K16	DUOINT3	-----	-----	-----	
K17	DVCC17	-----	-----	-----	
K18	DUOINT1	-----	-----	-----	
L1	FVCC3	-----	-----	-----	
L2	TPC1	TP6307	C-1	WF1	MAIN P.C.B.(C)
L3	TPC2	TP6308	D-1	WF1	MAIN P.C.B.(C)
L4	TPC3	TP6309	D-1	WF1	MAIN P.C.B.(C)
L5	LCD OPE SW	R6092 (RIGHT)	B-2	WF1	MAIN P.C.B.(C)
L6	EVF SW	R6121 (UPPER)	C-3	WF1	MAIN P.C.B.(C)
L13	ADM[11]	-----	-----	-----	
L14	ADM[15]	-----	-----	-----	
L15	FVSS15	-----	-----	-----	
L16	CAMVD	TP3031	F-3	WF74	MAIN P.C.B.(F)
L17	NC	-----	-----	-----	
L18	NC	-----	-----	-----	
M1	TPC0	TP6306	C-1	WF1	MAIN P.C.B.(C)
M2	TPC7	TP6313	C-1	WF1	MAIN P.C.B.(C)
M3	TPC4	TP6310	C-1	WF1	MAIN P.C.B.(C)
M4	LCD CS	IC8001-56	B-4	WF1	MAIN P.C.B.(C)
M5	LCD FRP DET	R8028 (RIGHT)	C-4	WF1	MAIN P.C.B.(C)
M6	DVCC32	-----	-----	-----	
M13	ADM[6]	-----	-----	-----	
M14	ADM[7]	-----	-----	-----	
M15	DVSS	-----	-----	-----	
M16	NC	-----	-----	-----	
M17	NC	-----	-----	-----	
M18	NC	-----	-----	-----	
N1	PS-L	-----	-----	-----	
N2	EEP PROTECT	IC6003-6	D-2	WF1	MAIN P.C.B.(C)
N3	RTC CS	IC6004-4	E-2	WF1	MAIN P.C.B.(C)
N4	EEP CS	IC6003-1	D-2	WF1	MAIN P.C.B.(C)
N5	NC	-----	-----	-----	
N7	DVSS	-----	-----	-----	
N8	TIMER INT	IC6004-3	E-2	WF1	MAIN P.C.B.(C)
N9	DVCC15	-----	-----	-----	
N10	DVSS	-----	-----	-----	
N11	PHOTO SW	R6090 (RIGHT)	B-2	WF1	MAIN P.C.B.(C)
N12	DVSS	-----	-----	-----	
N14	NC	-----	-----	-----	
N15	ADM[13]	-----	-----	-----	
N16	TEST3	-----	-----	-----	
N17	ADM[14]	-----	-----	-----	
N18	ADM[12]	-----	-----	-----	
P1	CG RST	IC302-19	D-2	WF1	CAMERA P.C.B. (F)
P2	NC	-----	-----	-----	
P3	ELECT SW	R6059 (LEFT)	D-2	WF1	MAIN P.C.B.(C)
P4	CASSETTE DOWN SW	R6060 (LEFT)	D-2	WF1	MAIN P.C.B.(C)
P5	HID ENV H	Q4502-B	A-3	WF1	MAIN P.C.B.(C)
P6	EEP2 PROTECT	-----	-----	-----	
P7	LENS TEST2	-----	-----	-----	
P8	LCD SCK	IC8001-58	B-4	WF1	MAIN P.C.B.(C)
P9	PC RST	D6005-C	C-3	WF1	MAIN P.C.B.(C)
P10	NC	-----	-----	-----	
P11	S PLUG	R6087 (LOWER)	C-3	WF1	MAIN P.C.B.(C)
P12	USB DPBIAS	Q6008-B	B-2	WF1	MAIN P.C.B.(C)
P13	MODE14	-----	-----	-----	
P14	NC	-----	-----	-----	
P15	ADM[2]	-----	-----	-----	
P16	ADM[8]	-----	-----	-----	
P17	ADM[10]	-----	-----	-----	
P18	ADM[9]	-----	-----	-----	
R1	USB INT	Q401-C	D-2	WF1	MAIN P.C.B.(F)
R2	POWER-SW	R6058 (LEFT)	D-2	WF1	MAIN P.C.B.(C)

CSP IC		Check point		WF NO.	Remarks
Pin	Name				
R3	HOST REQ	-----	----	----	
R4	HOST ACK	-----	----	----	
R5	POWER ON H	Q6002-B	E-3	WF1	MAIN P.C.B.(F)
R6	AFST	-----	----	----	
R7	ZENC	R6021 (LOWER)	C-3	WF75	MAIN P.C.B.(C)
R8	LCD DI	R6075 (LOWER)	C-3	WF1	MAIN P.C.B.(C)
R9	232C RXD	R6113 (LOWER)	C-3	WF1	MAIN P.C.B.(C)
R10	NC	-----	----	----	
R11	S-PHOTO SW2	R6061 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
R12	NC	-----	----	----	
R13	LIGHT SW	R6085(RIGHT)	B-2	WF1	MAIN P.C.B.(C)
R14	NC	-----	----	----	
R15	NC	-----	----	----	
R16	ADM[3]	-----	----	----	
R17	ADM[4]	-----	----	----	
R18	ADM[5]	-----	----	----	
T1	LIGHT ON H	R6004 (LEFT)	D-2	WF1	MAIN P.C.B.(C)
T2	SENS LED	Q6003-B	D-3	WF1	MAIN P.C.B.(F)
T3	NTSC/PAL	R6049 (RIGHT)	D-2	WF1	MAIN P.C.B.(C)
T4	MIC ON	R6070 (RIGHT)	E-3	WF1	MAIN P.C.B.(F)
T5	CCD ON H	-----	----	----	
T6	FENC	R6022 (LOWER)	C-3	WF76	MAIN P.C.B.(C)
T7	EEP TIMER SCK	IC6003-2	D-2	WF77	MAIN P.C.B.(C)
T8	LCD DO	R6075 (UPPER)	C-3	WF78	MAIN P.C.B.(C)
T9	232C TXD	R6114 (LOWER)	C-3	WF1	MAIN P.C.B.(C)
T10	NC	-----	----	----	
T11	POWER LED	Q6013-B	C-3	WF1	MAIN P.C.B.(C)
T12	STANDBY LED	Q6011-B	C-3	WF1	MAIN P.C.B.(C)
T13	AV PLUG	R6091 (RIGHT)	B-2	WF1	MAIN P.C.B.(C)
T14	USB DET	Q6009-C	B-2	WF1	MAIN P.C.B.(C)
T15	NC	-----	----	----	
T16	NC	-----	----	----	
T17	ADM[0]	-----	----	----	
T18	ADM[1]	-----	----	----	
U1	HOLE BIAS	R702 (LEFT)	F-2	WF79	CAMERA P.C.B. (C)
U2	PWM BIAS	R726 (LOWER)	B-2	WF80	CAMERA P.C.B. (F)
U3	EEP2 CS	R6001 (LOWER)	D-1	WF1	MAIN P.C.B.(C)
U4	MIC CLK	R6077 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
U5	CAM D3OFF	-----	----	----	
U6	LENS TEST1	-----	----	----	
U7	EEP TIMER DI	R6074 (UPPER)	C-2	WF81	MAIN P.C.B.(C)
U8	DVCC32	-----	----	----	
U9	WIDE LCD CS	R8023 (RIGHT)	C-4	WF1	MAIN P.C.B.(C)
U10	T-PHOTO SW2	R6066 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
U11	CROSS LED	-----	----	----	
U12	LCD RVS SW	R6088 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
U13	SS SW	R6086 (LOWER)	B-2	WF1	MAIN P.C.B.(C)
U14	DVCC33	-----	----	----	
U15	CARD DET	R6084 (LOWER)	B-2	WF1	MAIN P.C.B.(C)
U16	NC	-----	----	----	
U17	NC	-----	----	----	
U18	DVCC32	-----	----	----	
V2	HOLE GAIN	R704 (LOWER)	C-2	WF82	CAMERA P.C.B. (F)
V3	REMOCON	R6017 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
V4	MIC DATA	R6078 (LEFT)	C-1	WF1	MAIN P.C.B.(C)
V5	LENS LED	R6032 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
V6	LENS DRV RST	R6020 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
V7	EEP TIMER DO	R6074 (LOWER)	C-2	WF81	MAIN P.C.B.(C)
V8	WIDE LCD SCK	R8022 (RIGHT)	C-4	WF1	MAIN P.C.B.(C)
V9	WDE LCD DO	R8021 (RIGHT)	C-4	WF83	MAIN P.C.B.(C)
V10	S-PHOTO SW1	R6064 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
V11	T-PHOTO SW1	R6065 (LOWER)	C-2	WF1	MAIN P.C.B.(C)
V12	ACCESS LED	Q6012-B	C-3	WF1	MAIN P.C.B.(C)
V13	NC	-----	----	----	
V14	XRST	R3083 (UPPER)	F-3	WF1	MAIN P.C.B.(F)
V15	SD PROTECT	R6089 (LOWER)	B-2	WF1	MAIN P.C.B.(C)
V16	SHIMUKE	-----	----	----	
V17	NC	-----	----	----	

(C): COMPONENT SIDE (F): FOIL SIDE

LCD BACKLIGHT P.C.B. LSEP8359A1 (PV-GS39PL,PV-GS69PL)

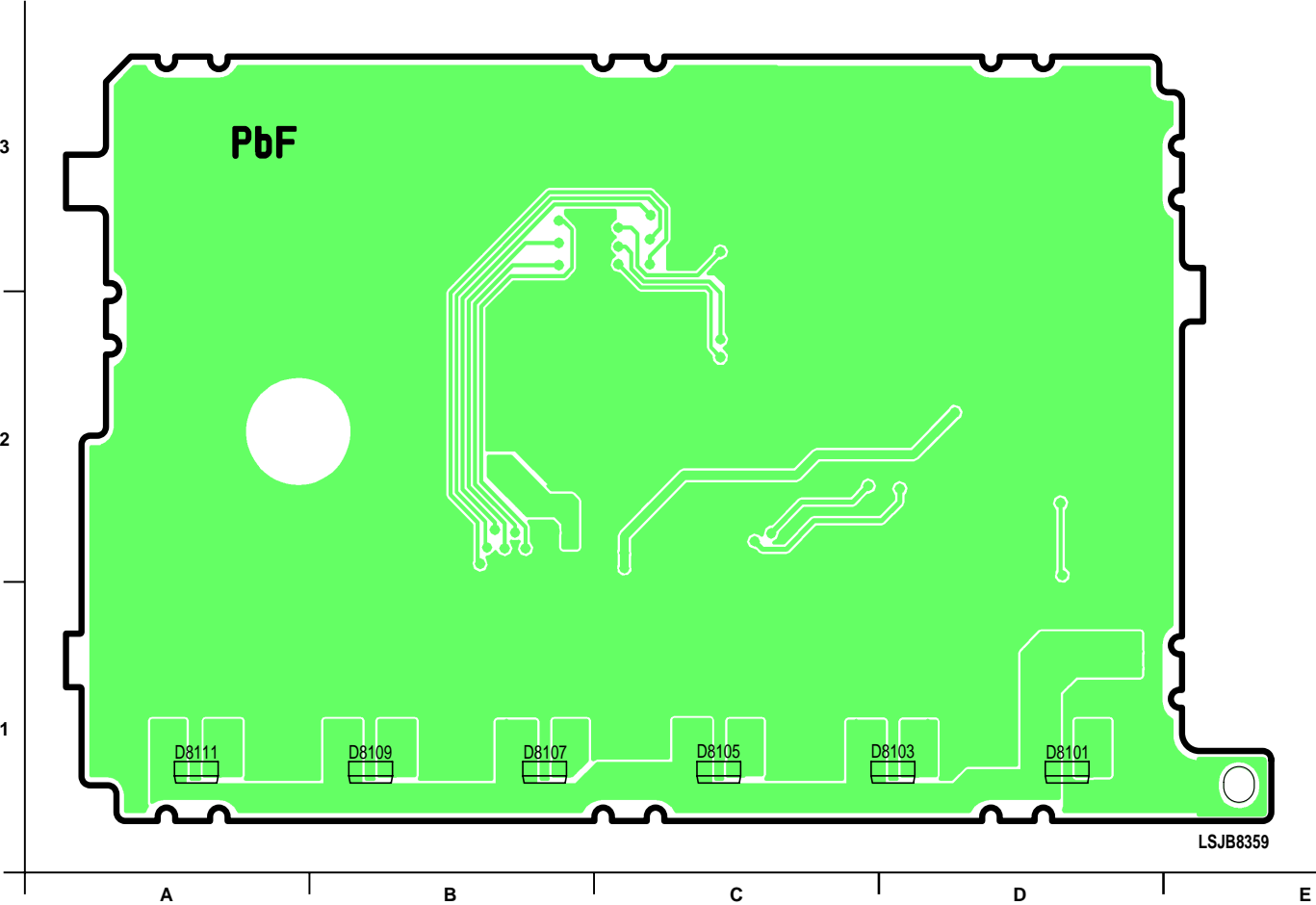
NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

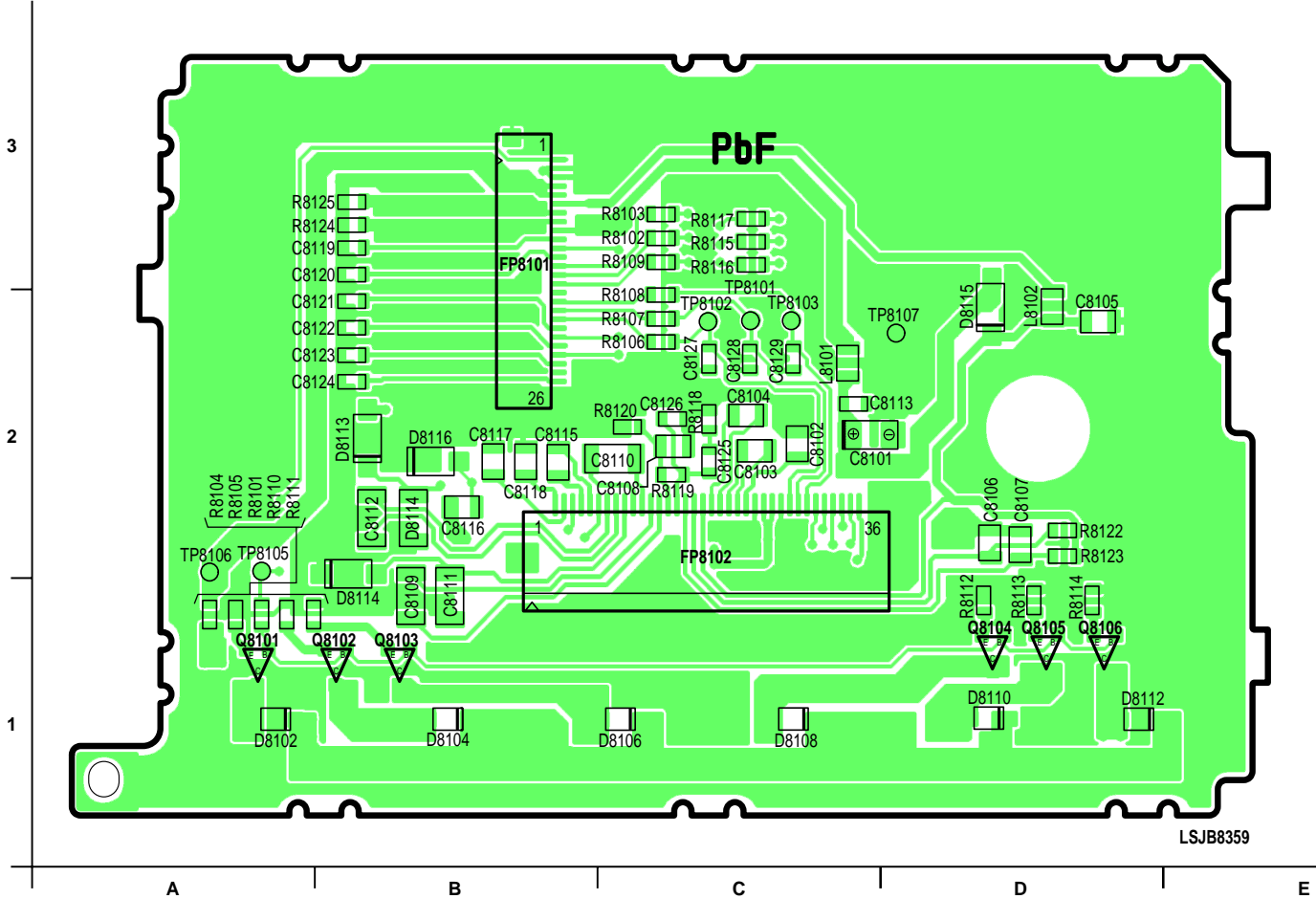
NOTE:
ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, D8107, D8109, AND D8111
ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS.
WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B. INSTEAD OF
INDIVIDUAL PARTS.

(COMPONENT SIDE)



(DUAL PATTERNS)

(FOIL SIDE)



(DUAL PATTERNS)

Parts Location

LCD BACKLIGHT P.C.B.																	
Transistors			TP8106	A-2	F	Coils			C8115	B-2	F	R8103	C-3	F	R8115	C-3	F
Q8101	A-1	F	TP8107	D-2	F	L8101	C-2	F	C8116	B-2	F	R8104	A-2	F	R8116	C-3	F
Q8102	B-1	F	Connectors			L8102	D-2	F	C8117	B-2	F	R8105	A-2	F	R8117	C-3	F
Q8103	B-1	F	FP8101	B-3	F	Capacitors			C8118	B-2	F	R8106	C-2	F	R8118	C-2	F
Q8104	D-1	F	FP8102	C-2	F	C8101	C-2	F	C8125	C-2	F	R8107	C-2	F	R8119	C-2	F
Q8105	D-1	F	Diodes			C8105	D-2	F	C8126	C-2	F	R8108	C-2	F	R8120	C-2	F
Q8106	D-1	F	D8101	D-1	C	C8109	B-1	F	C8127	C-2	F	R8109	C-3	F	R8122	D-2	F
Test Points			D8103	D-1	C	C8110	C-2	F	C8128	C-2	F	R8110	A-2	F	R8123	D-2	F
TP8101	C-2	F	D8105	C-1	C	C8111	B-1	F	C8129	C-2	F	R8111	A-2	F	R8124	B-3	F
TP8102	C-2	F	D8107	B-1	C	C8112	B-2	F	Resistors			R8112	D-1	F	R8125	B-3	F
TP8103	C-2	F	D8109	B-1	C	C8113	C-2	F	R8101	A-2	F	R8113	D-1	F			
TP8105	A-2	F	D8111	A-1	C	C8114	B-2	F	R8102	C-3	F	R8114	D-1	F			

LCD BACKLIGHT P.C.B. LSEP8334A1 (PV-GS29PL)

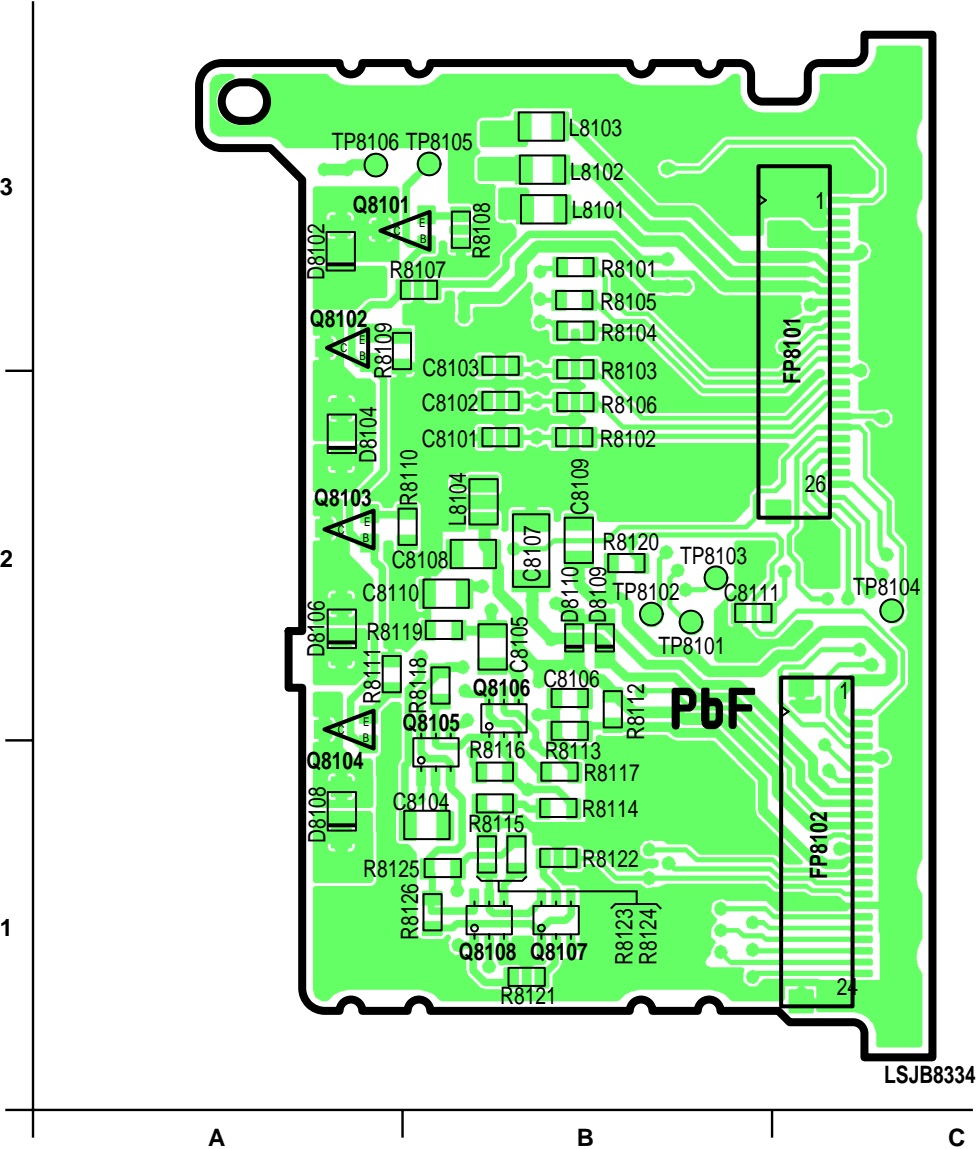
NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

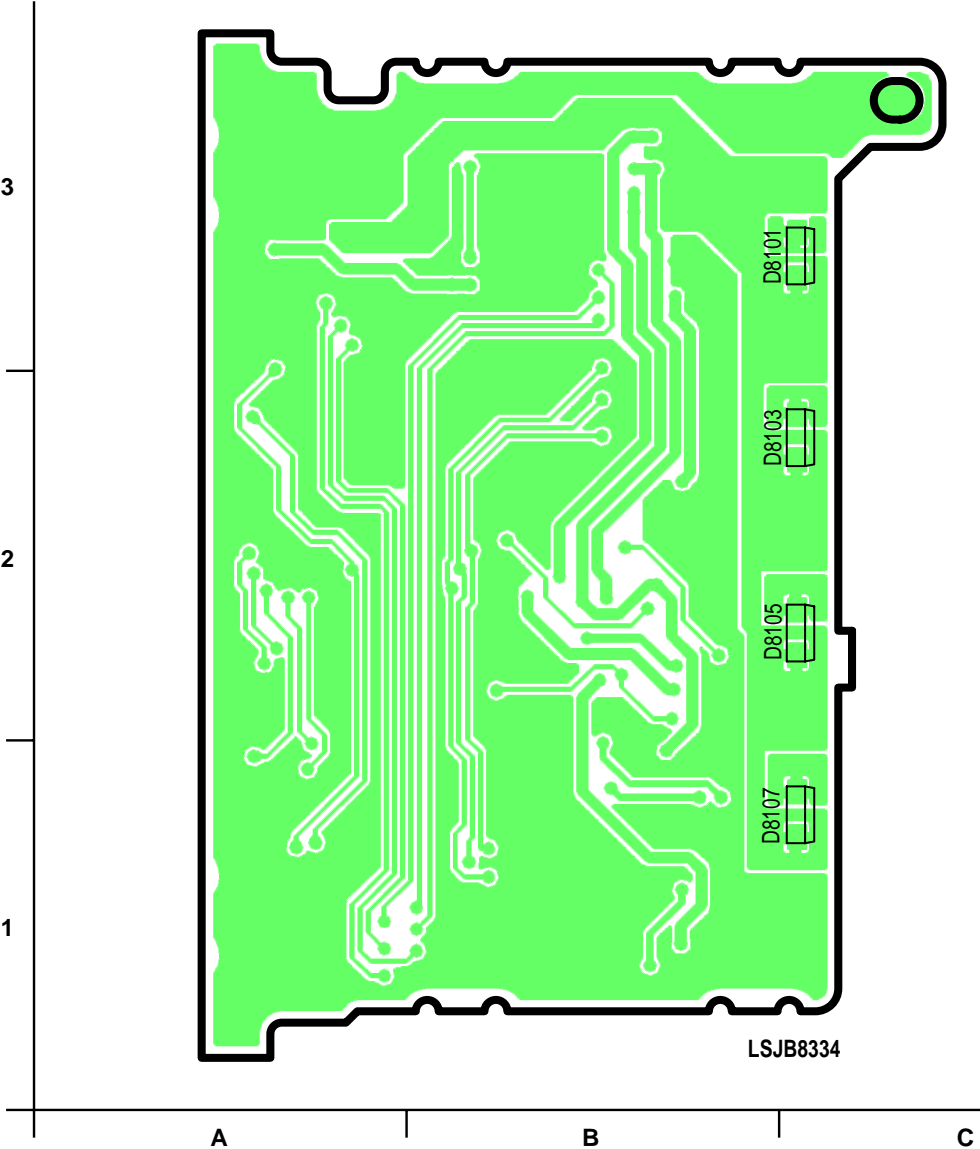
NOTE:
ALL INDIVIDUAL PARTS EXCEPT D8101, D8103, D8105, AND D8107
ON LCD BACKLIGHT P.C.B. ARE SUPPLIED AS REPLACEMENT PARTS.
WHEN SERVICING THESE PARTS, REPLACE LCD BACKLIGHT P.C.B.
INSTEAD OF INDIVIDUAL PARTS.

(COMPONENT SIDE)



(DUAL PATTERNS)

(FOIL SIDE)



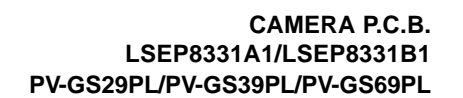
(DUAL PATTERNS)

Parts Location

LCD BACKLIGHT P.C.B.					
Transistors			C8102	B-2	C
Q8101	A-3	C	C8103	B-3	C
Q8102	A-3	C	C8104	B-1	C
Q8103	A-2	C	C8105	B-2	C
Q8104	A-1	C	C8106	B-2	C
Q8105	B-2	C	C8107	B-2	C
Q8106	B-2	C	C8108	B-2	C
Test Points			C8109	B-2	C
TP8101	B-2	C	C8110	B-2	C
TP8102	B-2	C	Resistors		
TP8103	B-2	C	R8101	B-3	C
TP8104	C-2	C	R8102	B-2	C
TP8105	B-3	C	R8103	B-2	C
TP8106	A-3	C	R8104	B-3	C
Connectors			R8105	B-3	C
FP8101	C-3	C	R8106	B-2	C
FP8102	C-1	C	R8107	B-3	C
Diodes			R8108	B-3	C
D8101	C-3	F	R8109	A-3	C
D8103	C-2	F	R8110	B-2	C
D8105	C-2	F	R8111	A-2	C
D8107	C-1	F	R8112	B-2	C
D8109	B-2	C	R8113	B-1	C
D8110	B-2	C	R8114	B-1	C
Coils			R8115	B-1	C
L8101	B-3	C	R8116	B-1	C
L8102	B-3	C	R8117	B-1	C
L8103	B-3	C	R8118	B-2	C
L8104	B-2	C	R8119	B-2	C
Capacitors			R8120	B-2	C
C8101	B-2	C			

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FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



CAMERA P.C.B.									
Integrated Circuits			C313	D-3	F	R704	C-2	F	
IC301	E-2	C	C314	E-3	C	R705	B-2	F	
IC302	D-2	F	C315	F-3	C	R706	B-2	F	
IC303	F-2	C	C316	C-3	F	R707	A-3	F	
IC701	F-3	C	C317	C-2	F	R708	G-3	C	
Transister			C318	C-3	F	R709	A-3	F	
Q701	B-2	F	C319	D-2	F	R710	B-3	F	
Test Points			C320	C-2	F	R711	B-3	F	
TP701	F-3	C	C321	C-3	F	R712	B-3	F	
TP702	F-3	C	C322	E-2	C	R713	G-3	C	
TP9907	C-1	F	C328	F-3	C	R714	B-3	F	
TP9908	C-1	F	C329	D-2	F	R715	A-3	F	
TP9909	C-1	F	C701	F-2	C	R716	B-2	F	
TP9911	E-3	C	C702	B-3	F	R718	B-3	F	
Connectors			C703	A-2	F	R719	B-3	F	
B9901	E-1	C	C704	A-2	F	R721	G-3	C	
FP301	D-3	F	C705	B-3	F	R722	G-3	C	
FP701	B-3	F	C708	G-3	C	R723	F-3	C	
FP9902	B-4	C	C709	G-3	C	R724	B-3	F	
Diodes			C710	G-3	C	R726	B-2	F	
D301	F-3	C	C711	B-3	F	R727	C-2	F	
D6301	D-1	F	C712	G-3	C	R6301	C-2	C	
Crystal Ocillator			C713	B-2	F	R6302	C-2	C <td></td>	
X301	C-2	F	C714	F-3	C	R6303	C-2	C	
Coils			C715	A-3	F	R6304	C-2	C	
L301	D-3	F	C716	B-2	F	R6305	B-2	C	
L302	C-3	F	C717	F-2	C	R6306	D-3	C	
L303	C-2	F	C718	F-3	C	R6307	C-3	C	
L6301	E-2	F	C720	F-3	C	R6308	C-3	C	
Switches			C721	B-3	F	R6309	B-3	C	
SW9901	A-2	F	C722	G-3	C	R6310	B-3	C	
SW9902	G-3	F	C6301	E-2	F	R6311	C-3	C	
SW9903	A-2	C	C6302	D-3	C	R6312	C-3	C	
SW9904	D-4	C	C6303	D-2	C	R6313	C-3	C	
Capacitors			C6304	C-2	C	R6314	C-3	C	
C301	F-2	C	C6305	C-2	C	R6315	B-3	C	
C302	E-2	C	C6306	C-2	C	R6316	C-2	C	
C303	E-2	C	C6307	B-2	C	R9901	C-3	C	
C304	C-2	F	C6308	B-2	C	R9902	B-3	C	
C305	C-2	F	Resistors			R9903	C-3	C	
C306	D-3	F	R302	C-2	F	R9904	D-3	C	
C307	D-3	F	R303	C-2	F	R9905	C-3	C	
C308	E-3	C	R304	C-2	F	R9906	C-3	C	
C309	E-3	C	R305	C-1	F	R9913	A-3	C	
C310	D-3	F	R311	D-3	F	R9914	A-3	C	
C311	D-3	F	R312	F-3	C				
C312	D-3	F	R702	F-2	C				


CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 2A 32V FUSE.
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MÊME
TYPE 2A 32V

NOTE: MULTILAYER P.C.B.
THIS P.C.B. IS Multi-Layer P.C.B. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN
FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH
SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

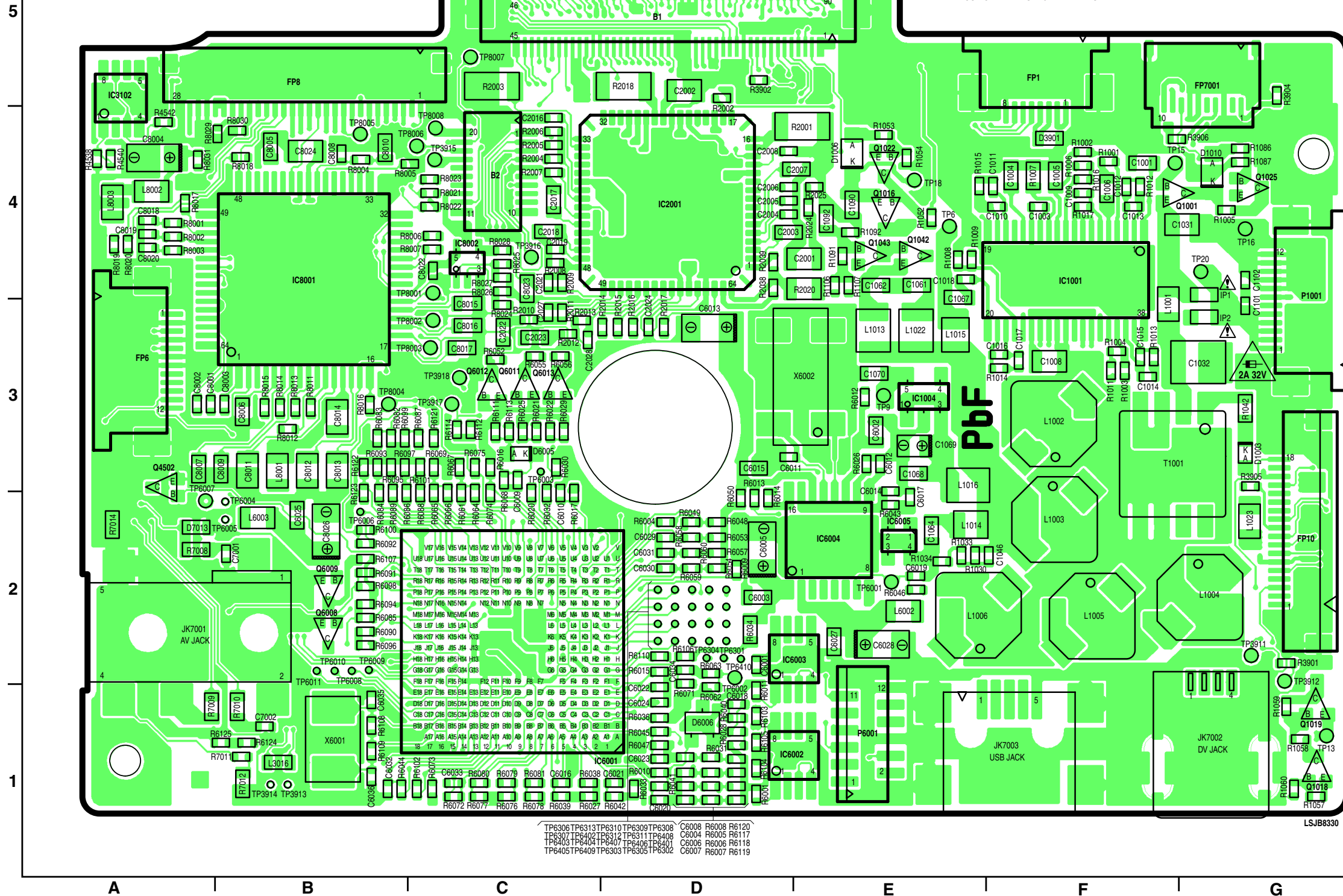
NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN  HAVE
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

(COMPONENT SIDE)



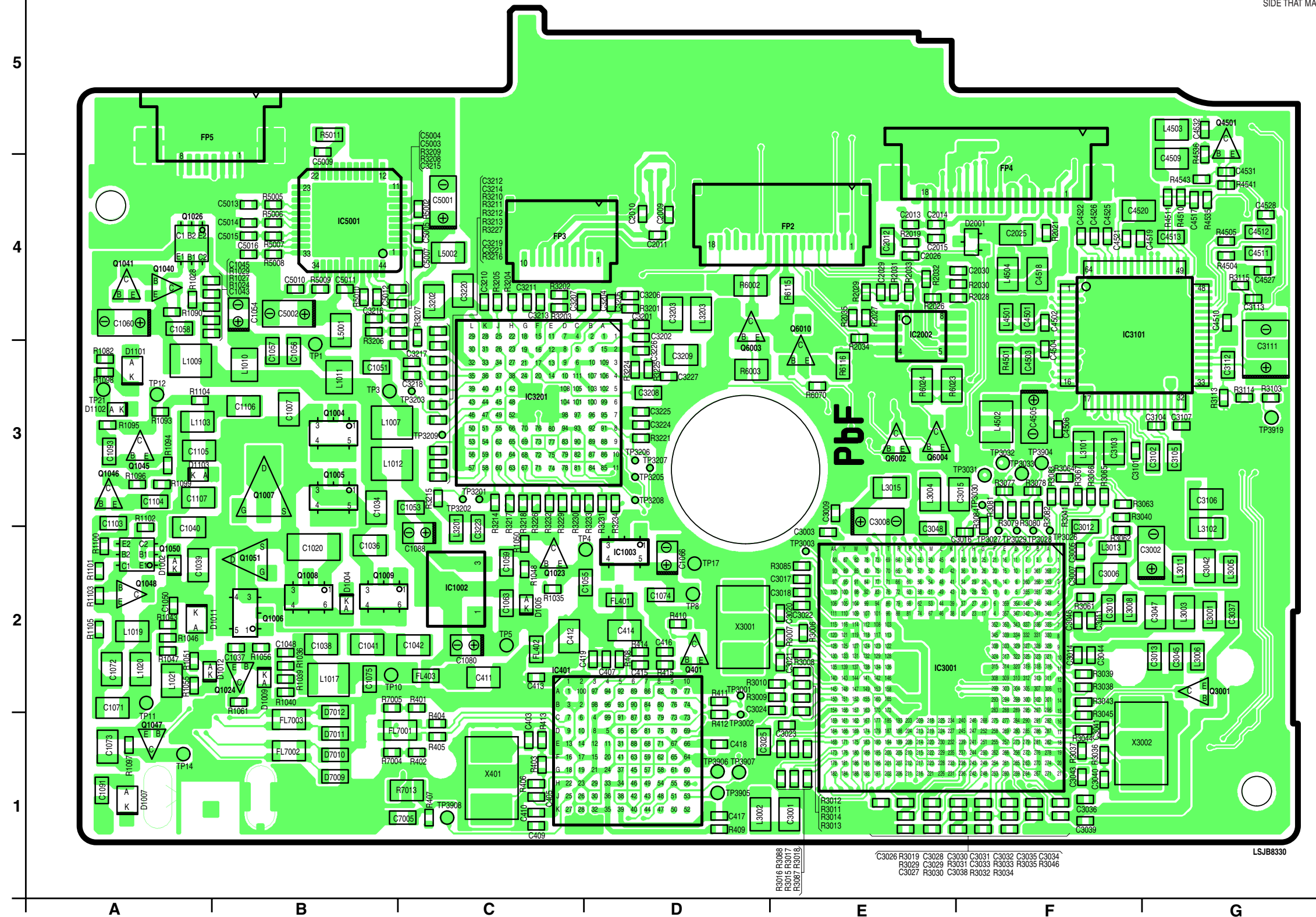
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NOTE: MULTILAYER P.C.B.
THIS P.C.B. IS Multi-Layer P.C.B. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT PATETRNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

(FOIL SIDE)



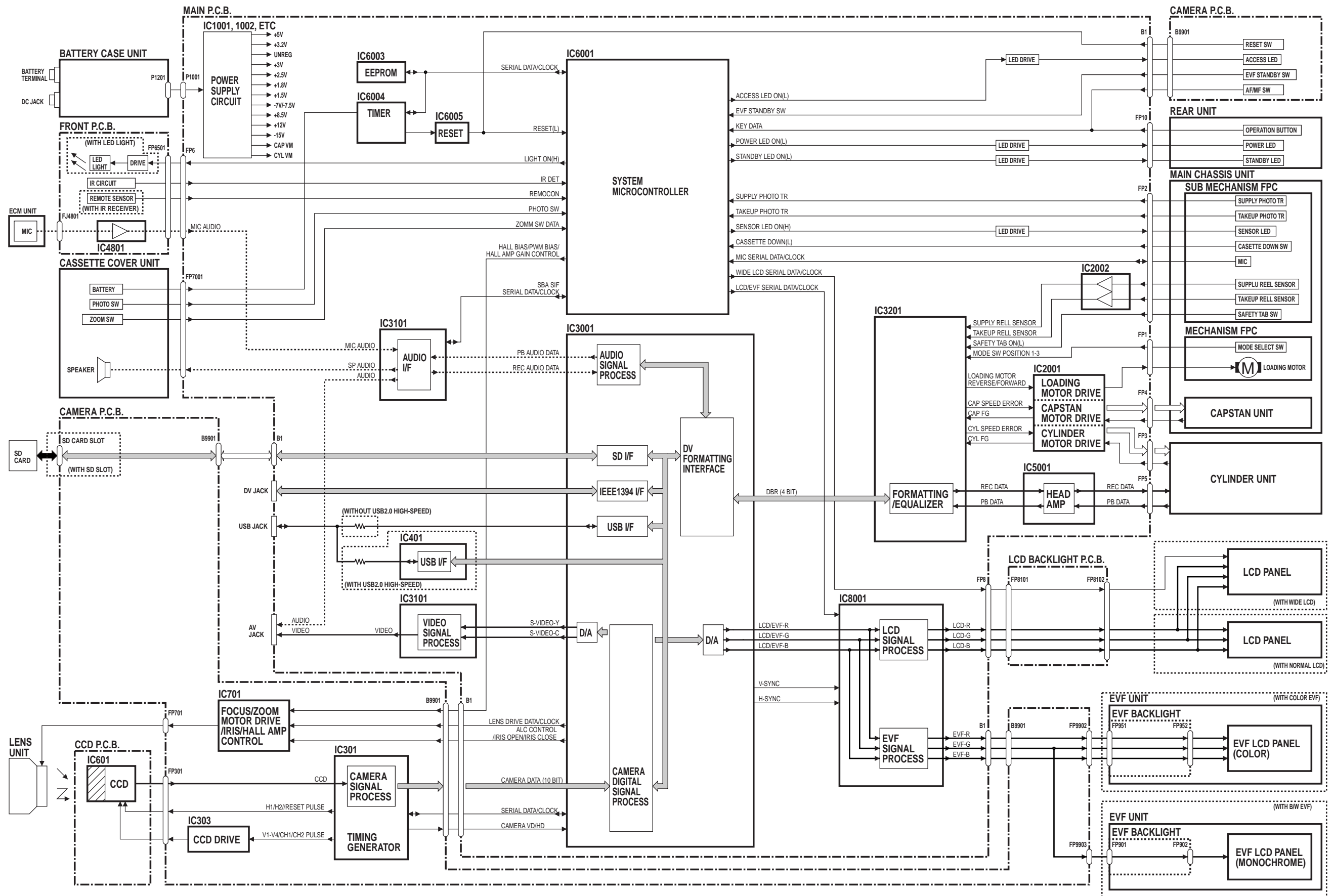
MAIN P.C.B.
LSEP8330A1/LSEP8330B1/LSEP8330C1
PV-GS29PL/PV-GS39PL/PV-GS69PL

MAIN P.C.B.

Parts Location

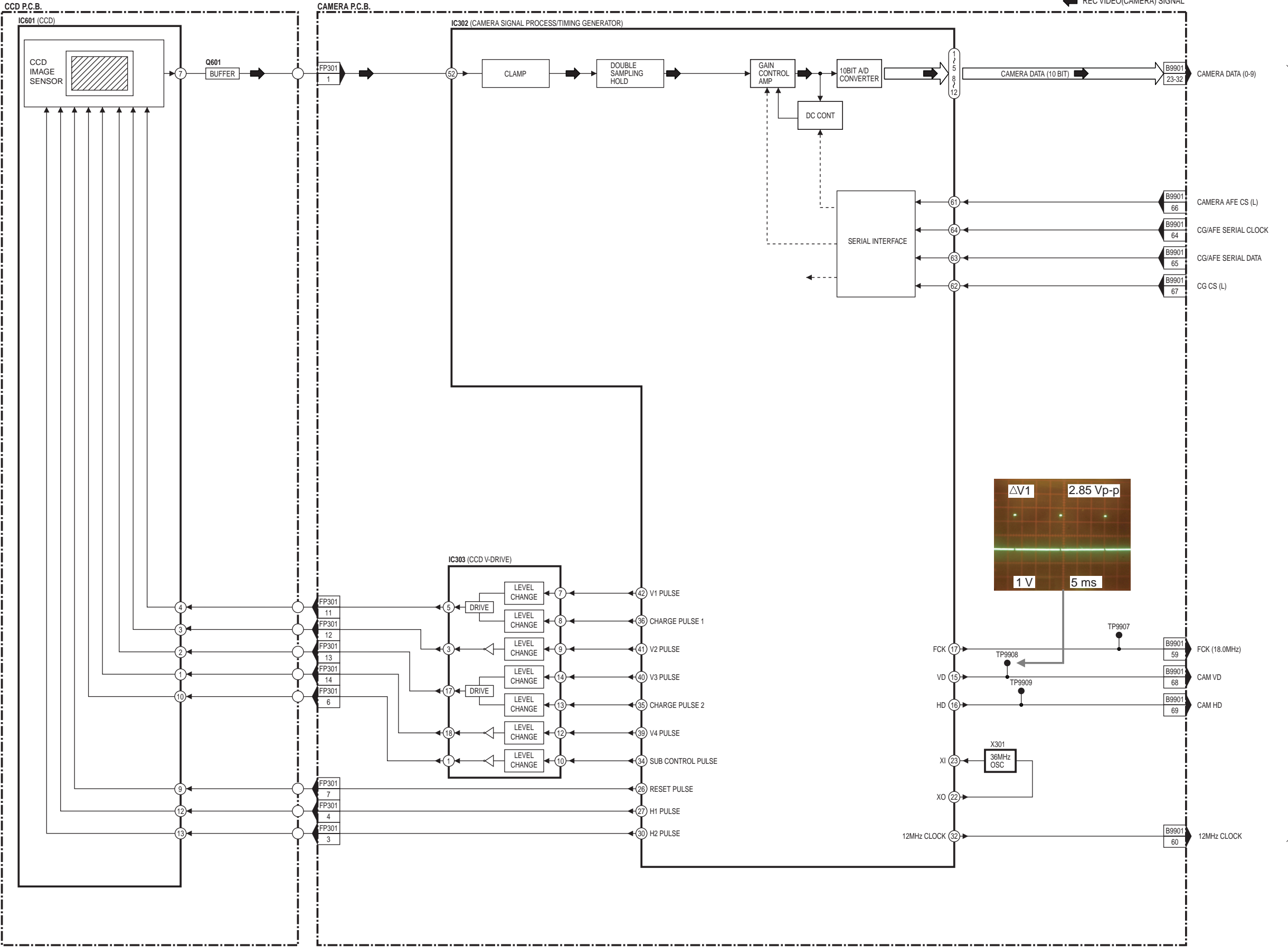
MAIN C.B.A.																																			
Integrated Circuits			TP17	D-2	F	TP6409	C-1	C	L1020	A-2	F	C1039	A-2	F	C3011	F-2	F	C4511	G-4	F	C8015	C-3	C	R1104	A-3	F	R3083	F-3	F	R6024	E-3	F	R6098	B-2	C
IC401	C-2	F	TP18	E-4	C	TP6410	D-2	C	L1021	A-2	F	C1040	A-2	F	C3012	F-2	F	C4512	G-4	F	C8016	C-3	C	R1107	E-4	C	R3084	F-3	F	R6025	C-3	C	R6099	B-3	C
IC1001	F-4	C	TP20	G-4	C	TP8001	B-4	C	L1022	E-3	C	C1041	B-2	F	C3013	G-2	F	C4513	G-4	F	C8017	C-3	C	R2001	E-4	C	R3085	E-2	F	R6026	E-3	C	R6100	B-2	C
IC1002	C-2	F	TP21	A-3	F	TP8002	B-3	C	L1023	G-2	C	C1042	C-2	F	C3014	F-2	F	C4517	G-4	F	C8018	A-4	C	R2002	D-4	C	R3087	E-1	F	R6027	C-1	C	R6101	C-3	C
IC1003	D-2	F	TP3001	D-2	F	TP8003	B-3	C	L1103	A-3	F	C1043	B-4	F	C3015	F-3	F	C4518	F-4	F	C8019	A-4	C	R2003	C-5	C	R3088	E-1	F	R6028	D-1	C	R6102	C-1	C
IC1004	E-3	C	TP3002	D-1	F	TP8004	B-3	C	L3001	G-2	F	C1046	F-2	C	C3016	F-2	F	C4519	G-4	F	C8020	A-4	C	R2004	C-4	C	R3103	G-3	F	R6029	C-3	C	R6103	D-1	C
IC2001	D-4	C	TP3003	E-2	F	TP8005	B-4	C	L3002	D-1	F	C1048	B-2	F	C3017	E-2	F	C4520	F-4	F	C8022	C-4	C	R2005	C-4	C	R3114	G-3	F	R6030	C-3	C	R6104	D-1	C
IC2002	E-4	F	TP3026	F-2	F	TP8006	B-4	C	L3003	G-2	F	C1050	A-2	F	C3018	E-2	F	C4531	G-4	F	C8023	C-4	C	R2006	C-4	C	R3115	G-4	F	R6031	D-1	C	R6105	D-1	C
IC3001	E-2	F	TP3027	F-2	F	TP8007	C-5	C	L3004	E-3	F	C1051	B-3	F	C3020	E-2	F	C4532	G-5	F	Resistors			R2007	C-4	C	R3201	D-4	F	R6032	C-2	C	R6106	D-2	C
IC3101	F-4	F	TP3028	F-2	F	TP8008	C-5	C	L3005	G-2	F	C1053	C-3	F	C3021	E-2	F	C5001	C-4	F	R401	C-2	F	R2008	C-4	C	R3202	C-4	F	R6033	D-1	C	R6107	B-2	C
IC3102	A-5	C	TP3029	F-2	F	Connector			L3006	G-2	F	C1056	B-3	F	C3022	E-2	F	C5002	B-4	F	R402	C-1	F	R2009	C-4	C	R3203	C-4	F	R6034	D-2	C	R6108	B-1	C
IC3201	C-3	F	TP3030	F-3	F	B1	D-5	C	L3008	F-2	F	C1057	B-3	F	C3023	E-1	F	C5004	C-5	F	R404	C-1	F	R2010	C-3	C	R3204	C-4	F	R6036	D-1	C	R6109	B-1	C
IC5001	B-4	F	TP3031	F-3	F	B2	C-4	C	L3011	G-2	F	C1058	A-4	F	C3024	D-2	F	C5005	C-4	F	R405	C-1	F	R2011	C-3	C	R3205	C-4	F	R6038	C-1	C	R6110	D-2	C
IC6001	C-1	C	TP3032	F-3	F	FP1	F-5	C	L3013	F-2	F	C1060	A-4	F	C3025	D-1	F	C5007	C-4	F	R407	C-1	F	R2012	C-3	C	R3206	B-4	F	R6039	C-1	C	R6111	C-3	C
IC6003	D-2	C	TP3033	F-3	F	FP2	E-4	F	L3015	E-3	F	C1061	E-4	C	C3026	E-1	F	C5009	B-4	F	R408	D-2	F	R2013	C-3	C	R3207	C-4	F	R6040	D-1	C	R6112	C-3	C
IC6004	E-2	C	TP3201	C-3	F	FP3	C-4	F	L3016	B-1	C	C1062	E-4	C	C3027	E-1	F	C5011	B-4	F	R409	D-1	F	R2014	D-3	C	R3208	C-4	F	R6041	D-1	C	R6113	C-3	C
IC6005	E-2	C	TP3202	C-3	F	FP4	F-4	F	L3101	F-3	F	C1063	C-2	F	C3028	E-1	F	C5012	B-4	F	R410	D-2	F	R2015	D-3	C	R3209	C-5	F	R6042	C-1	C	R6114	C-3	C
IC8001	B-4	C	TP3203	C-3	F	FP5	A-5	F	L3102	G-2	F	C1064	E-2	C	C3029	E-1	F	C5013	B-4	F	R411	D-2	F	R2016	D-3	C	R3210	C-4	F	R6043	E-2	C	R6115	E-4	F
IC8002	C-4	C	TP3205	D-3	F	FP6	A-3	C	L3201	C-2	F	C1067	E-4	C	C3030	E-1	F	C5014	B-4	F	R413	C-1	F	R2017	D-3	C	R3211	C-4	F	R6044	B-1	C	R6116	E-3	F
Transistors			TP3206	D-3	F	FP8	B-5	C	L3202	C-4	F	C1068	E-3	C	C3031	F-1	F	C5015	B-4	F	R414	D-2	F	R2018	D-5	C	R3212	C-4	F	R6045	D-1	C	R6117	D-1	C
Q401	D-2	F	TP3207	D-3	F	FP10	G-2	C	L3203	D-4	F	C1069	E-3	C	C3032	F-1	F	C5016	B-4	F	R415	D-2	F	R2019	E-4	F	R3218	C-2	F	R6046	F-2	C	R6118	D-1	C
Q1001	F-4	C	TP3208	D-3	F	FP7001	G-5	C	L4501	F-4	F	C1070	E-3	C	C3033	F-1	F	C6001	D-2	C	R1002	F-4	C	R2020	E-4	C	R3225	D-3	F	R6047	D-1	C	R6119	D-1	C
Q1004	B-3	F	TP3209	C-3	F	P1001	G-4	C	L4502	F-3	F	C1071	A-2	F	C3034	F-1	F	C6002	E-3	C	R1004	F-3	C	R2021	F-4	F	R3226	C-2	F	R6049	D-2	C	R6120	D-1	C
Q1005	B-3	F	TP3904	F-3	F	P6001	E-1	C	L4503	G-5	F	C1072	A-2	F	C3035	F-1	F	C6003	D-2	C	R1005	G-4	C	R2024	E-4	C	R3227	C-4	F	R6050	D-2	C	R6121	C-3	C
Q1006	B-2	F	TP3905	D-1	F	Fuses			L4504	F-4	F	C1073	A-1	F	C3036	F-1	F	C6004	D-1	C	R1006	F-4	C	R2025	E-4	C	R3229	C-2	F	R6052	C-3	C	R6123	B-2	C
Q1007	B-3	F	TP3906	D-1	F	IP1	G-4	C	L5001	B-4	F	C1074	D-2	F	C3037	G-2	F	C6005	D-2	C	R1007	F-4	C	R2026	E-4	F	R3230	C-2	F	R6053	D-2	C	R6124	B-1	C
Q1008	B-2	F	TP3907	D-1	F	IP2	G-3	C	L5002	C-4	F	C1075	B-2	F	C3038	E-1	F	C6006	D-1	C	R1008	E-4	C	R2027	E-4	F	R3231	D-2	F	R6054	D-2	C	R6125	A-1	C
Q1009	B-2	F	TP3908	C-1	F	Diodes			L6002	E-2	C	C1080	C-2	F	C3039	F-1	F	C6007	D-1	C	R1009	E-4	C	R2028	F-4	F	R3232	C-2	F	R6055	C-3	C	R7004	B-1	F
Q1016	E-4	C	TP3911	G-2	C	D1002	A-2	F	L6003	B-2	C	C1088	C-2	F	C3040	F-1	F	C6008	D-1	C	R1011	F-3	C	R2029	E-4	F	R3233	D-2	F	R6056	C-3	C	R7005	B-2	F
Q1018	G-1	C	TP3912	G-2	C	D1003	G-3	C	L8001	B-3	C	C1090	E-4	C	C3041	F-1	F	C6009	C-2	C	R1012	F-4	C	R2030	F-4	F	R3234	D-2	F	R6057	D-2	C	D7008	A-2	C
Q1019	G-1	C	TP3913	B-1	C	D1006	E-4	C	L8002	A-4	C	C1091	A-1	F	C3043	F-1	F	C6010	C-2	C	R1013	F-3	C	R2031	E-4	F	R3901	G-2	C	R6058	D-2	C	R7009	A-1	C
Q1022	E-4	C	TP3914	B-1	C	D1007	A-1	F	Filters			C1093	A-3	F	C3044	F-2	F	C6013	D-3	C	R1014	F-3	C	R2032	E-4	F	R3904	G-5	C	R6059	D-2	C	R7010	B-1	C
Q1024	B-2	F	TP3915	C-4	C	D1009	B-2	F	FL401	D-2	F	C1101	G-3	C	C3046	F-2	F	C6014	E-2	C	R1015	E-4	C	R2033	E-4	F	R3905	G-3	C	R6060	D-2	C	R7011	A-1	C
Q1025	G-4	C	TP3916	C-4	C	D1010	G-4	C	FL402	C-2	F	C1102	G-4	C	C3047	G-2	F	C6015	D-3	C	R1016	F-4	C												

OVERALL BLOCK DIAGRAM



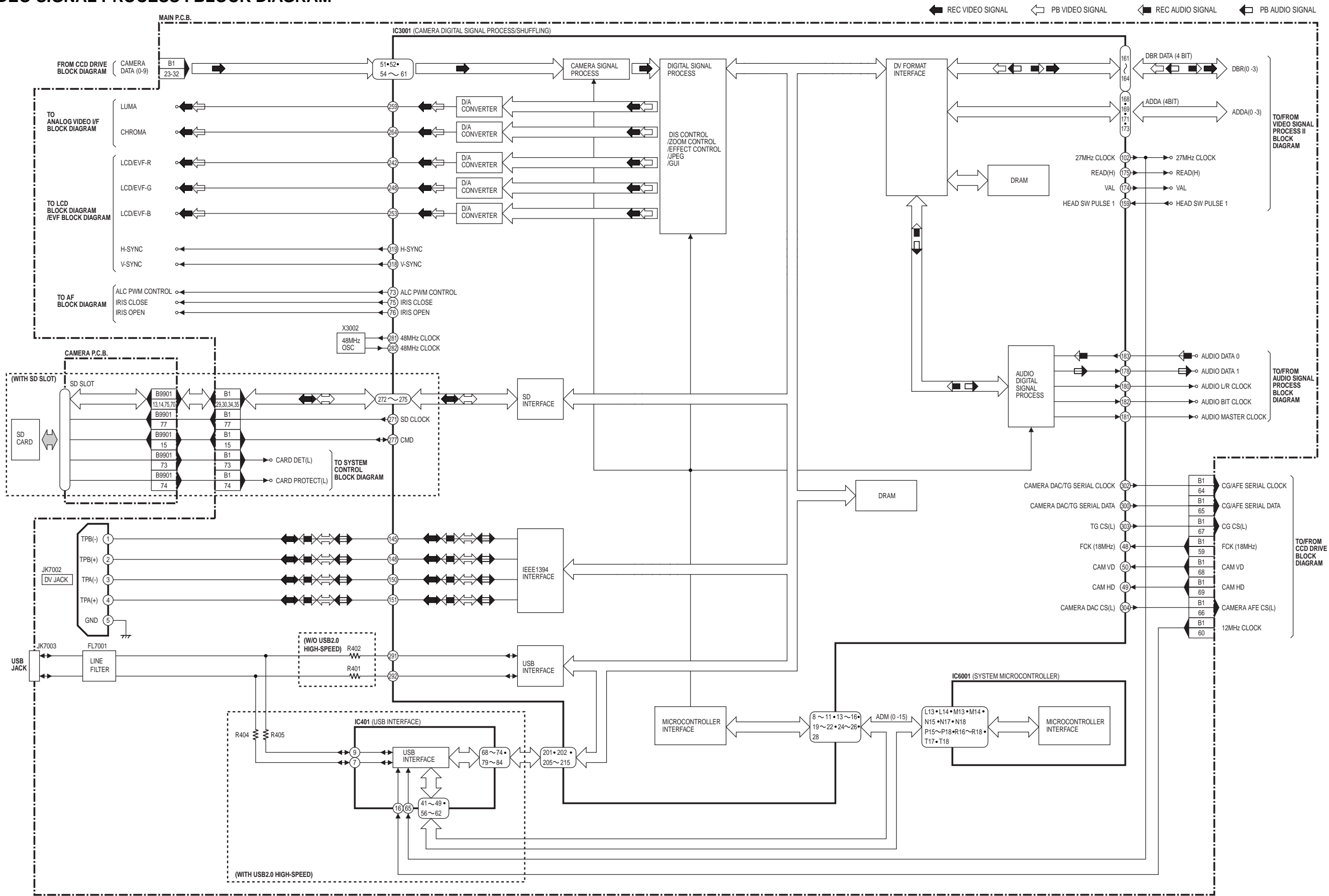
OVERALL BLOCK DIAGRAM PV-GS29PL/PV-GS39PL/PV-GS69PL

CCD DRIVE BLOCK DIAGRAM



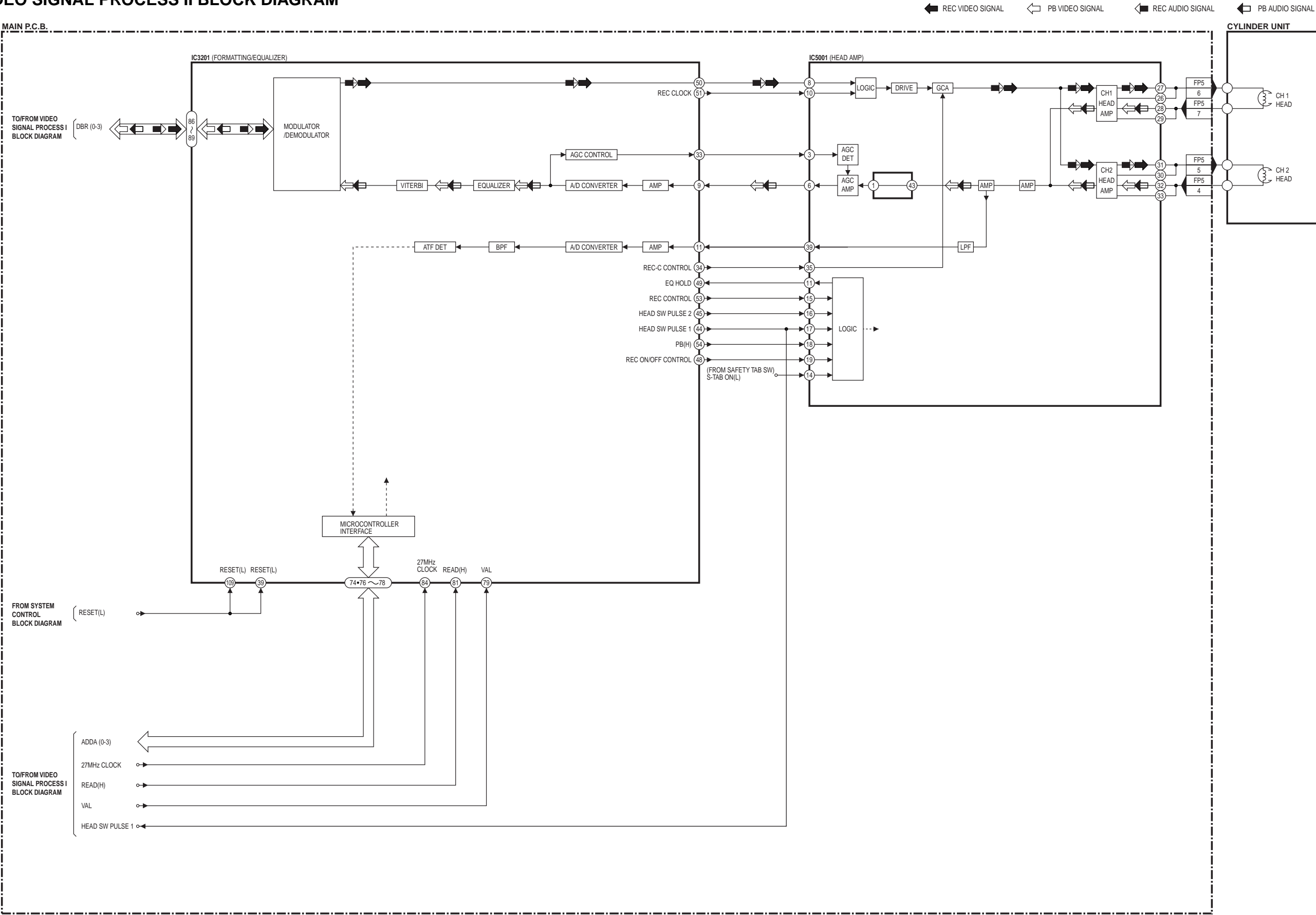
CCD DRIVE BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

VIDEO SIGNAL PROCESS I BLOCK DIAGRAM



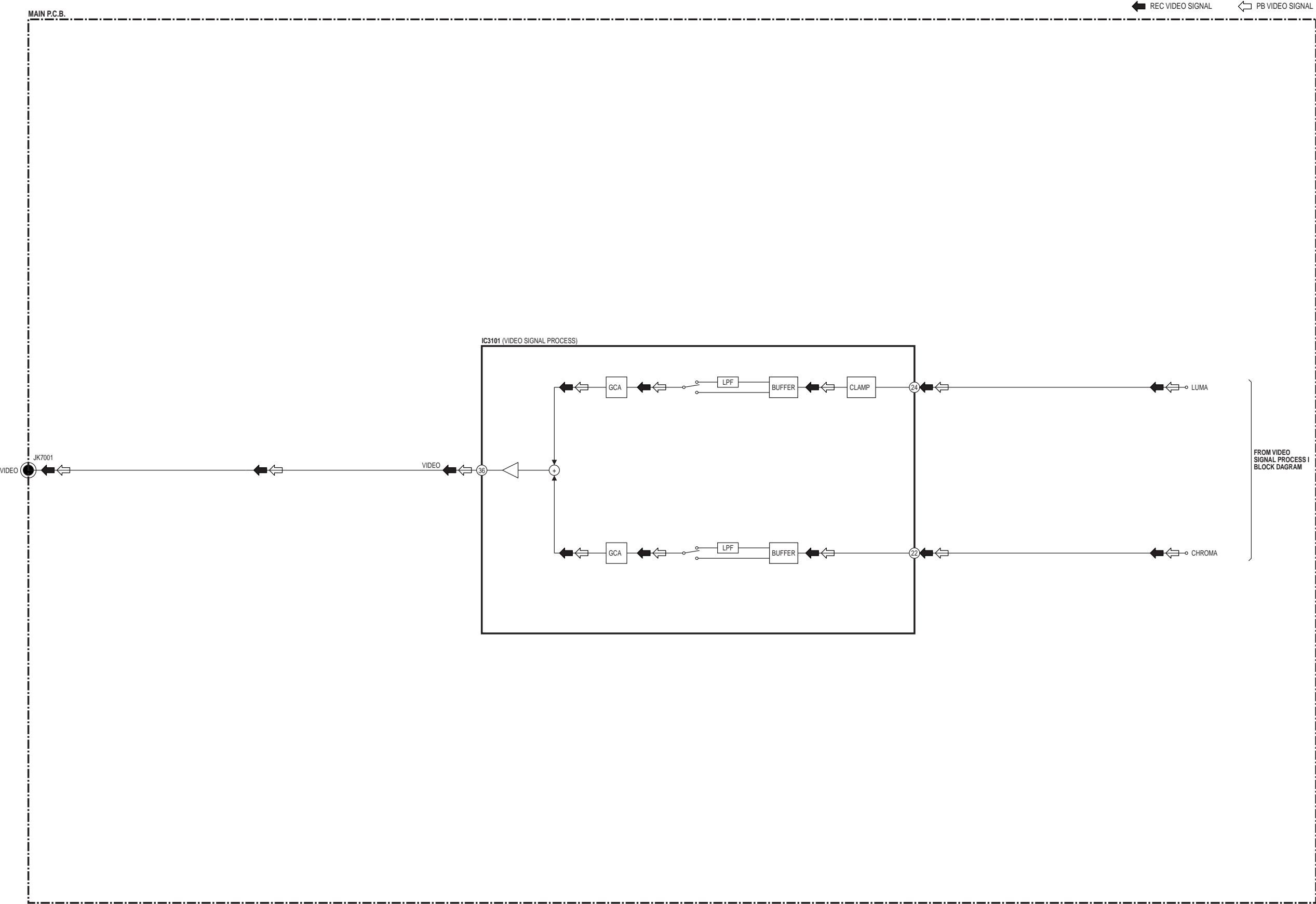
VIDEO SIGNAL PROCESS I BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

VIDEO SIGNAL PROCESS II BLOCK DIAGRAM

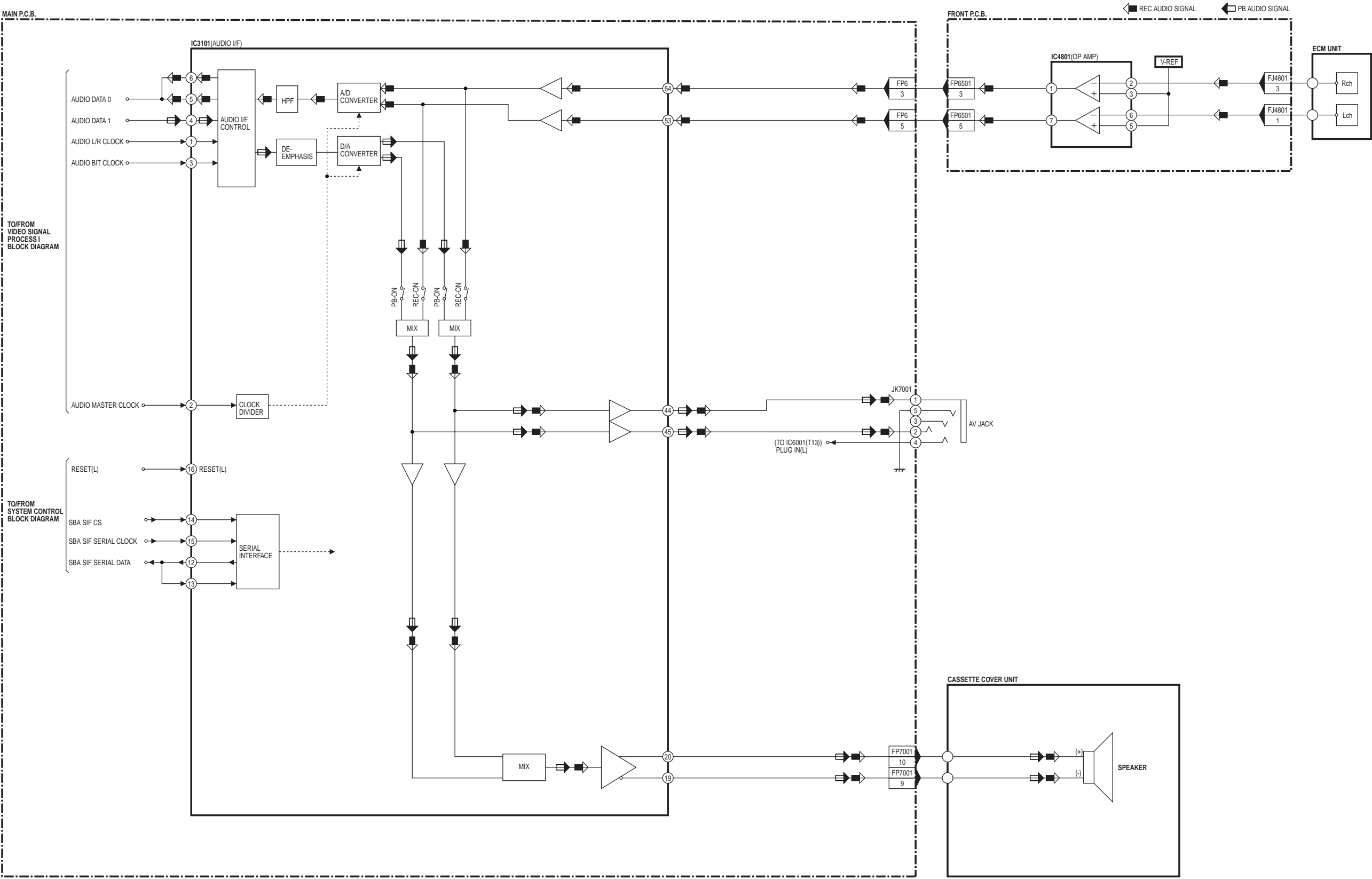


VIDEO SIGNAL PROCESS II BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

ANALOG VIDEO I/F BLOCK DIAGRAM

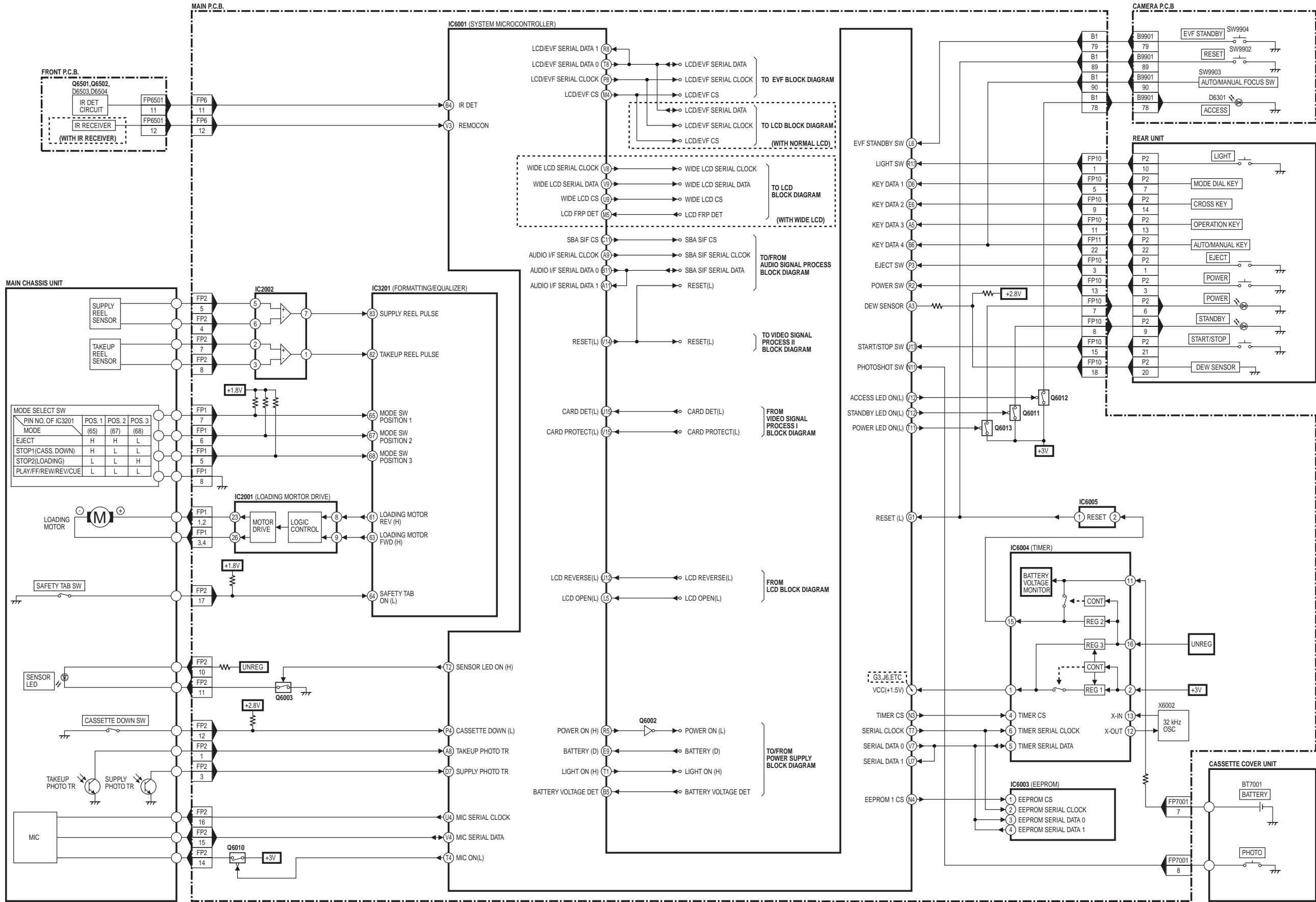


AUDIO SIGNAL PROCESS BLOCK DIAGRAM



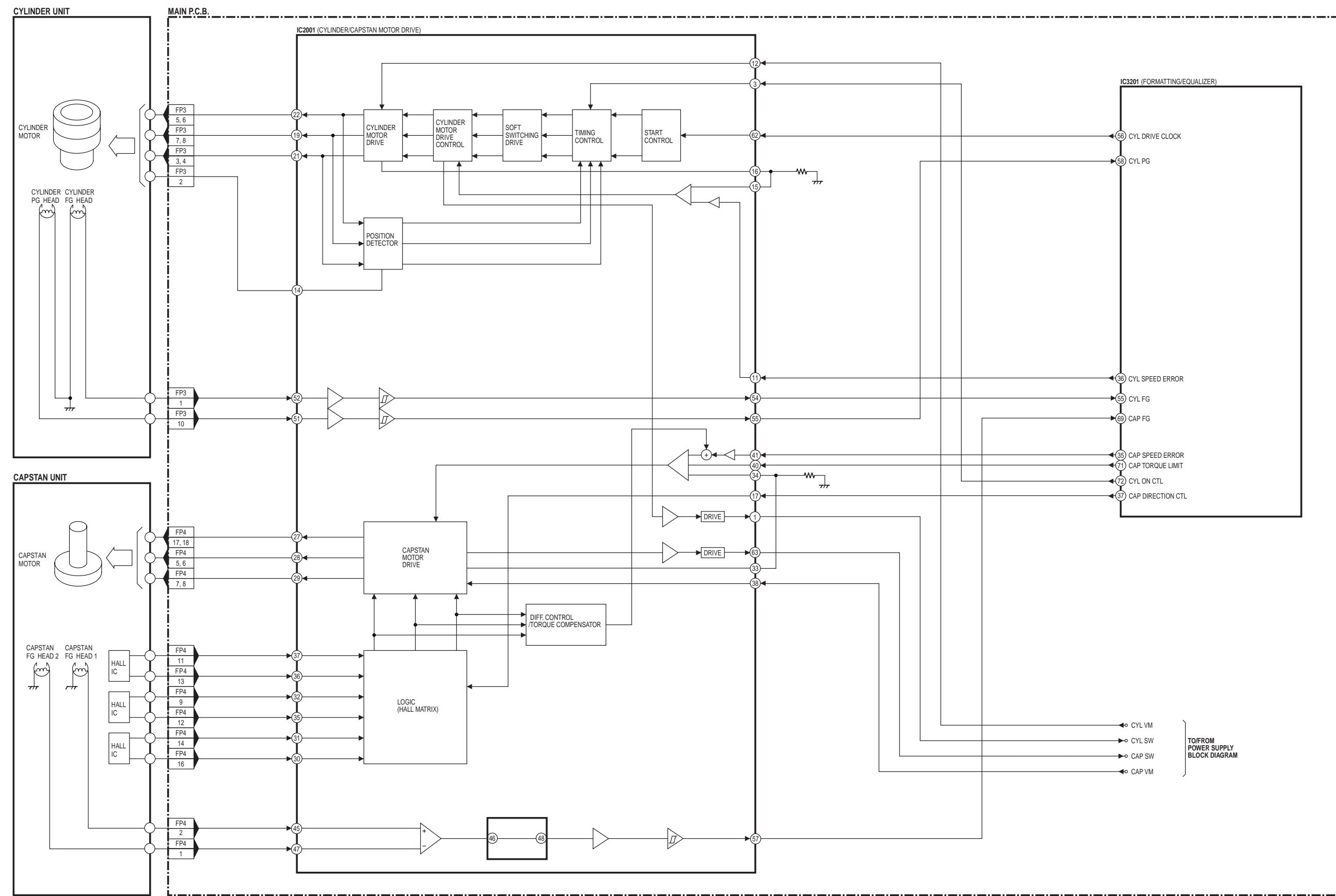
AUDIO SIGNAL PROCESS BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

SYSTEM CONTROL BLOCK DIAGRAM

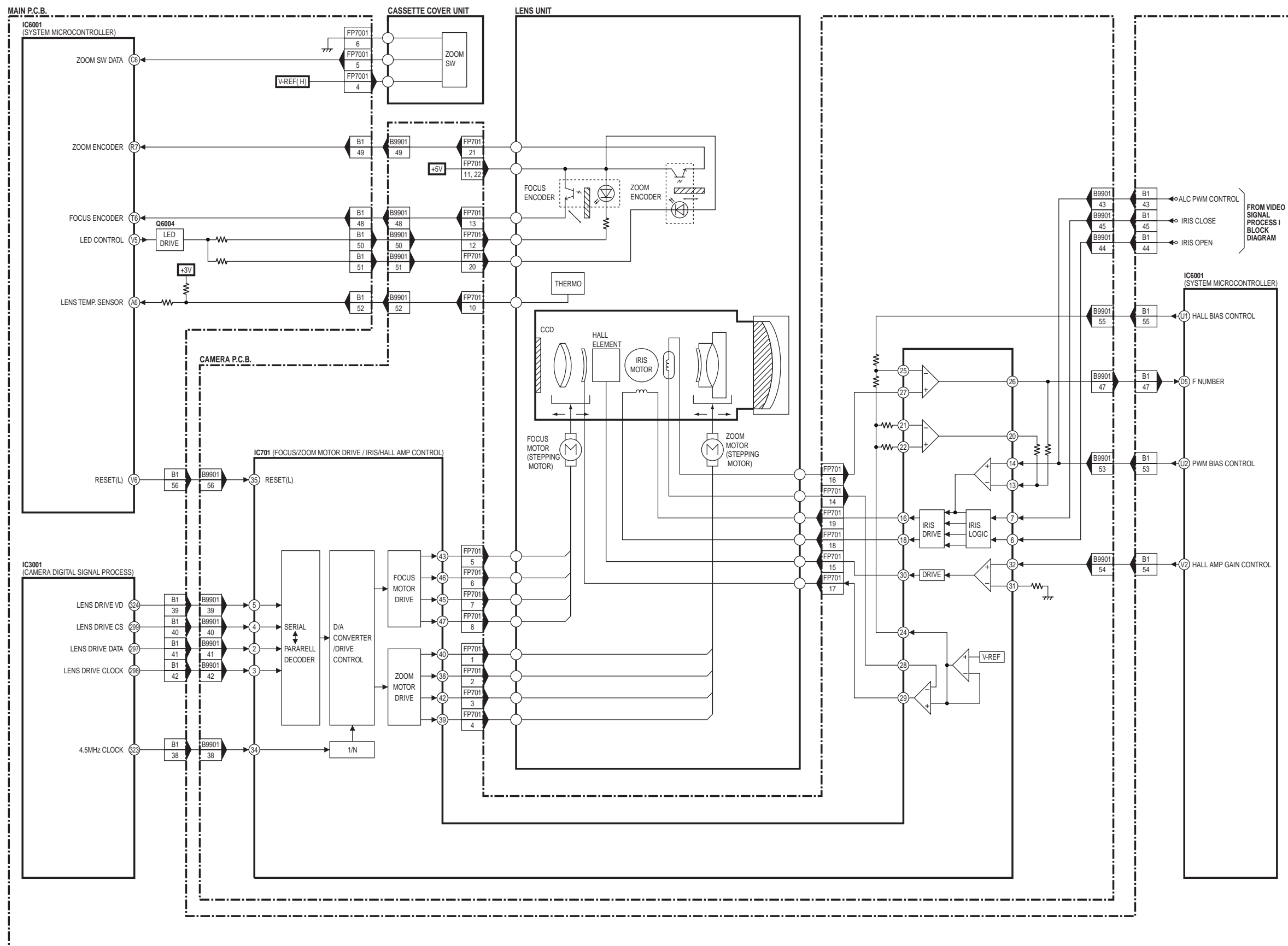


SYSTEM CONTROL BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL

SERVO BLOCK DIAGRAM



MAIN BODY



The diagram illustrates the electrical connections and signal processing for an LCD system, organized into several functional blocks:

- MAIN P.C.B.:** Contains the central IC8001 (LCD RGB SIGNAL PROCESS) and various control and signal processing blocks. It interfaces with the Camera P.C.B. and the R Shaft Case Unit.
- CAMERA P.C.B.:** Includes components like B9901 and SW9901, which manage the OPEN/CLOSE signal for the LCD.
- R SHAFT CASE UNIT:** Features a REVERSE/NORMAL switch and various connectors (FP8) for signal and power distribution.
- LCD BACKLIGHT P.C.B.:** Contains the V-COM DRIVE circuit and various connectors (FP8101) for the backlight and panel signals.
- LCD PANEL UNIT:** The final output stage, receiving signals from the LCD BACKLIGHT P.C.B. and the MAIN P.C.B.

Signal and Control Connections:

- TO SYSTEM CONTROL BLOCK DIAGRAM:** LCD OPEN (L) and LCD REVERSE (L) signals.
- FROM VIDEO SIGNAL PROCESS I BLOCK DIAGRAM:** V-SYNC, H-SYNC, LCD/EFV-R, LCD/EFV-G, and LCD/EFV-B signals.
- FROM SYSTEM CONTROL BLOCK DIAGRAM:** LCD/EFV CS, LCD/EFV SERIAL CLOCK, and LCD/EFV SERIAL DATA signals.

Internal Processing and Control:

- IC8001 (LCD RGB SIGNAL PROCESS):** The central processing unit for RGB signals, with pins for OEH, STH2, STH1, CLK1, CLK2, CLK3, OEV, STV2, STV1, CPV, Q2H, and others.
- D/A CONVERTER:** Converts digital signals to analog for the LCD drive.
- V-COM AC CONTROL and BACKLIGHT CONTROL:** Manage the voltage and power for the LCD and backlight.
- REVERSE (UP/DOWN) CONTROL and REVERSE (L/R) CONTROL:** Manage the reverse control signals.

Waveform Analysis:

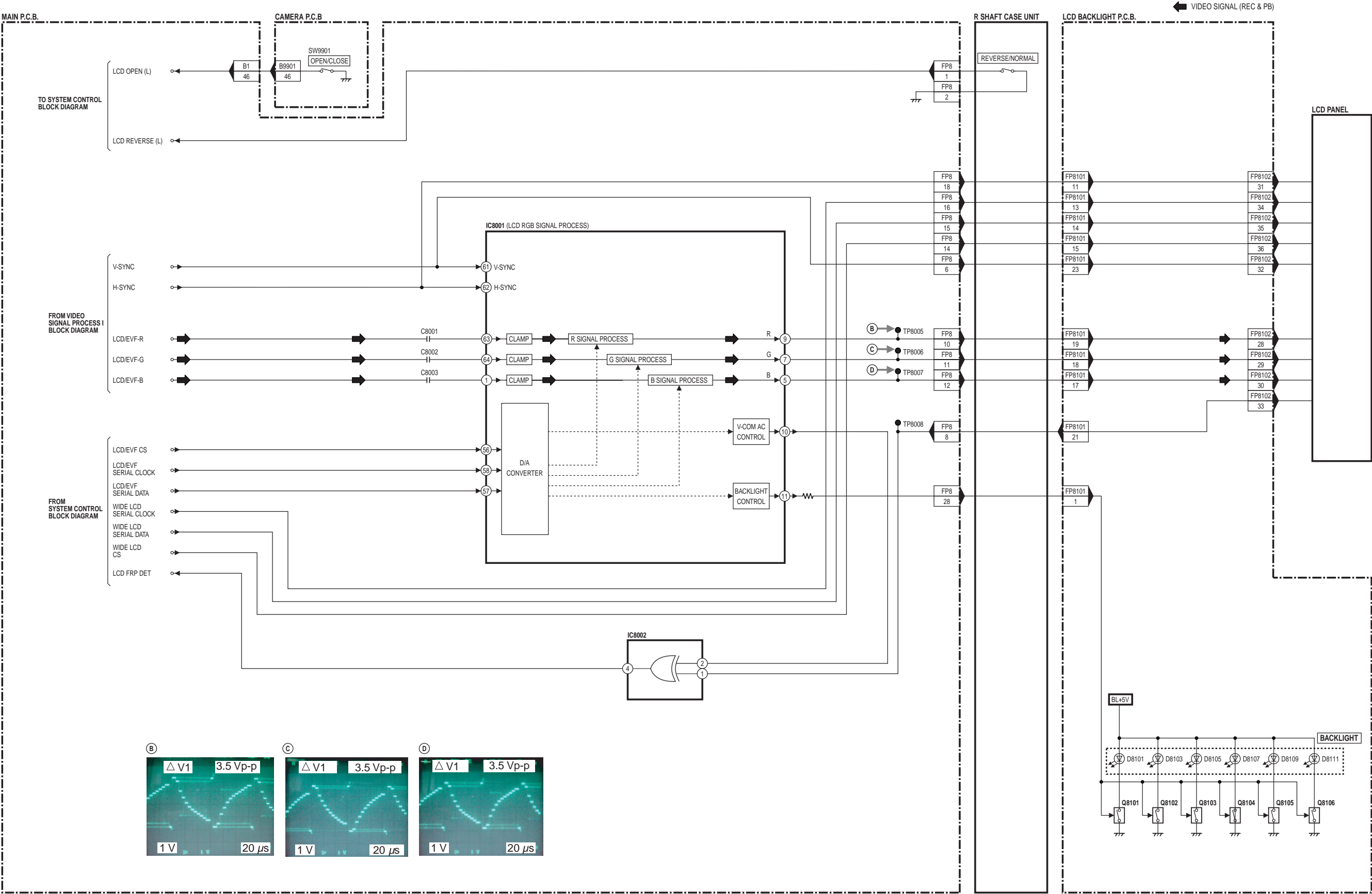
- (A) $\Delta V1$ 7.0 Vp-p:** Shows a square wave signal with a peak-to-peak voltage of 7.0 V.
- (B) $\Delta V1$ 3.5 Vp-p:** Shows a square wave signal with a peak-to-peak voltage of 3.5 V.
- (C) $\Delta V1$ 3.5 Vp-p:** Shows a square wave signal with a peak-to-peak voltage of 3.5 V.
- (D) $\Delta V1$ 3.5 Vp-p:** Shows a square wave signal with a peak-to-peak voltage of 3.5 V.

Backlight and Panel Connections:

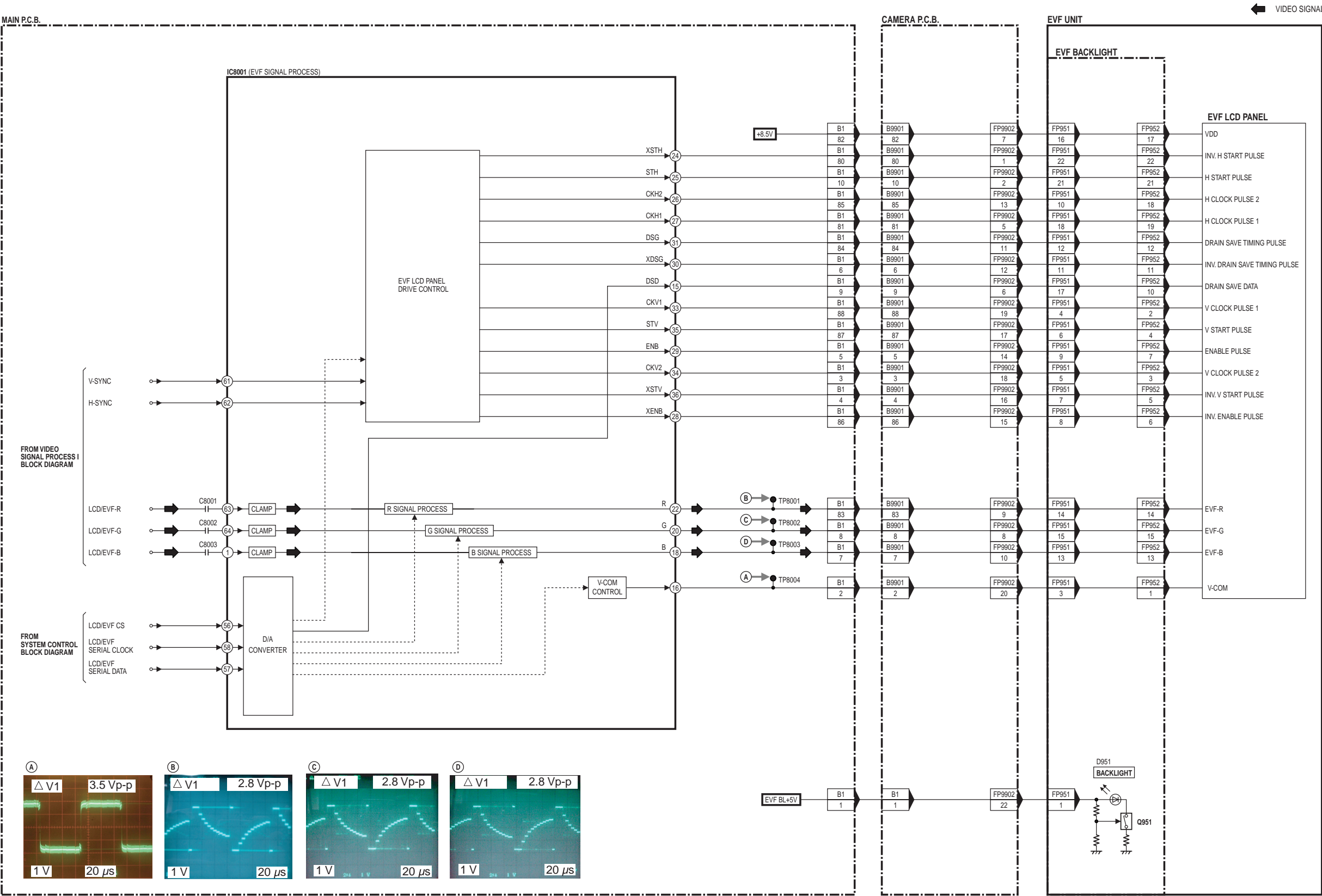
- BL+SV:** Backlight and Signal Voltage connection.
- BACKLIGHT:** Includes LEDs (D8101, D8103, D8105, D8107) and transistors (Q8101, Q8102, Q8103, Q8104) for driving the backlight.

LCD DRIVE BLOCK DIAGRAM
PV-GS29PL

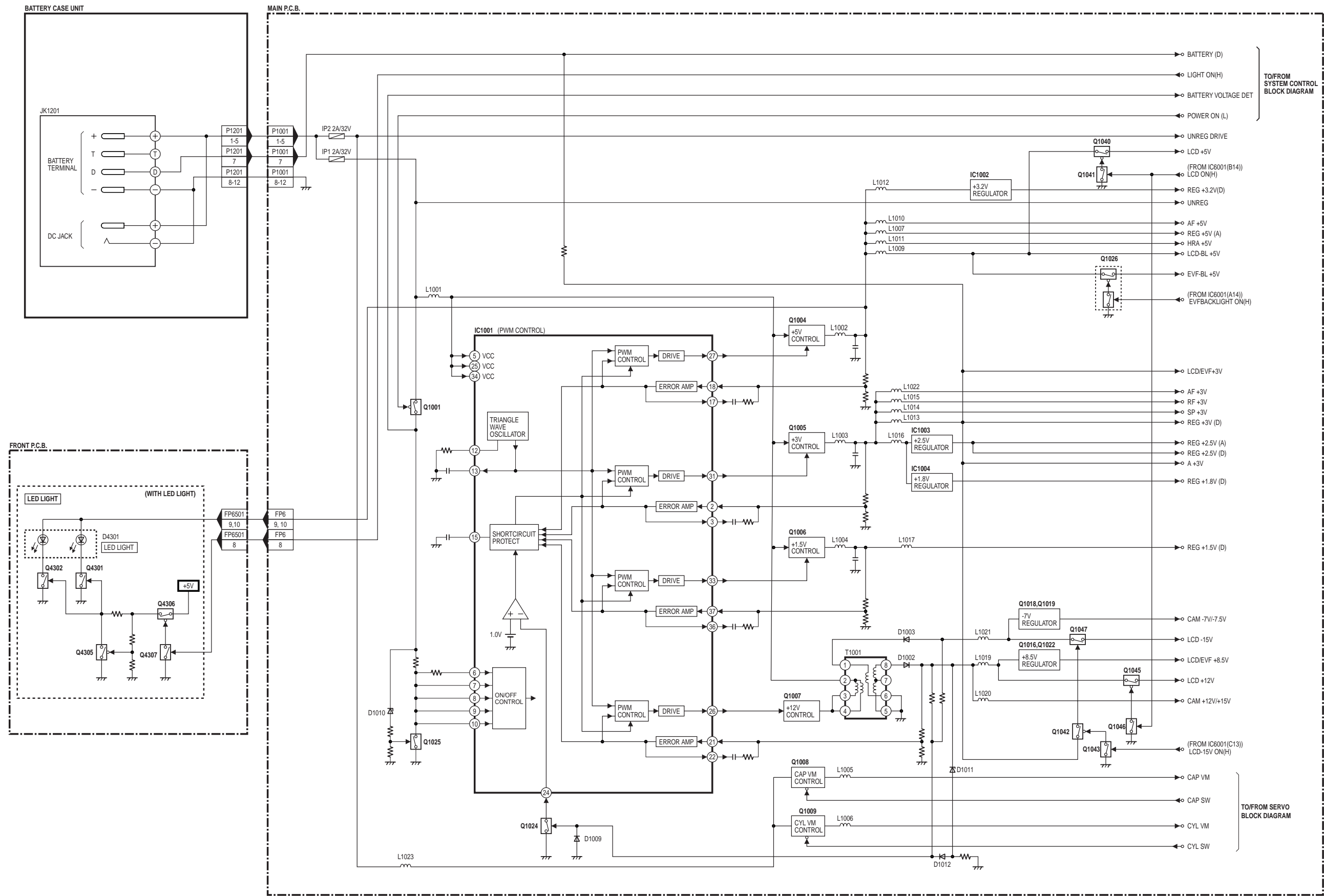
LCD DRIVE BLOCK DIAGRAM (Models: PV-GS39PL/PV-GS69PL)



EVF BLOCK DIAGRAM



POWER SUPPLY BLOCK DIAGRAM



POWER SUPPLY BLOCK DIAGRAM
PV-GS29PL/PV-GS39PL/PV-GS69PL